

B. ALL CONSTRUCTION SHALL CONFORM TO THE INTERNATIONAL BUILDING CODE, 2009 EDITION.

C. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT THE JOB SITE BEFORE COMMENCING WORK AND SHALL REPORT ANY DISCREPANCIES TO THE OWNER'S REPRESENTATIVE.

D. OMISSIONS OR CONFLICTS BETWEEN VARIOUS ELEMENTS OF THE DRAWINGS, NOTES, AND DETAILS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE AND RESOLVED BEFORE PROCEEDING

E. DETAILS SHOWN SHALL BE INCORPORATED INTO THE PROJECT AT ALL APPROPRIATE LOCATIONS WHETHER SPECIFICALLY CALLED OUT OR NOT.

F. THE CONTRACTOR MUST SUBMIT IN WRITING ANY REQUESTS FOR MODIFICATIONS TO THE PLANS AND SPECIFICATIONS. SHOP DRAWINGS SUBMITTED TO THE OWNER'S REPRESENTATIVE FOR REVIEW DO NOT CONSTITUTE "IN WRITING" UNLESS IT IS CLEARLY NOTED THAT SPECIFIC CHANGES ARE BEING REQUESTED

G. UNLESS SPECIFICALLY SHOWN ON THESE PLANS, NO STRUCTURAL MEMBER SHALL BE CUT, DRILLED, OR NOTCHED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE OWNER'S REPRESENTATIVE.

DIMENSIONAL CONTROL

WITH THE WORK.

A. DO NOT USE SCALED DIMENSIONS. WHERE NO WRITTEN DIMENSION IS PROVIDED, CONSULT WITH THE OWNER'S REPRESENTATIVE FOR CLARIFICATION BEFORE PROCEEDING WITH THE WORK.

B. THE FOLLOWING MEMBERS CAN BE LOCATED WITHOUT WRITTEN DIMENSIONS:

1. CENTER MEMBERS ON GRID LINES THAT ARE SHOWN LOCATED ON GRID LINES.

2. SPACE MEMBERS EQUALLY BETWEEN MEMBERS ON GRID LINES OR MEMBERS OTHERWISE LOCATED, WHERE MEMBERS ARE SHOWN EQUALLY SPACED.

C. ELEVATIONS NOTED ON THE STRUCTURAL DRAWINGS USE THE FOLLOWING CONVENTIONS:

1. ACTUAL ELEVATIONS ARE DESIGNATED IN DECIMAL FEET (EXAMPLE: EL +203.58'), REFERENCING NGVD

2. ELEVATIONS REFERENCED TO FIRST FLOOR AT EL + 0' - 0" ARE DESIGNATED IN FEET AND INCHES

3. FEATURES THAT ARE CLOSELY RELATED TO OTHER SIMILAR ELEMENTS AT INDIVIDUAL FLOORS, ARE REFERENCED TO THE ELEVATION OF THE TYPICAL ELEMENT AT THAT LEVEL. DIMENSIONS ARE GIVEN IN

a. TOP OF CONCRETE AT DEPRESSED AREAS IS RELATED TO TYPICAL TOP OF CONCRETE (EXAMPLE:

b. TOP OF STEEL IS REFERENCED TO TYPICAL TOP OF STEEL FOR THAT LEVEL [EXAMPLE W12x14 (-6")].

4. SEE TYPICAL STEEL DETAILS FOR TOP OF STEEL WORK POINT CONVENTIONS AT SLOPED DECK AND

D. DIMENSION POINTS ARE AS FOLLOWS, UNLESS OTHERWISE INDICATED:

1. TYPICAL, U.O.N.: CENTERLINE.

(EXAMPLE : EL + 15' - 0").

2. WALLS: FACE OF CONCRETE OR MASONRY SURFACES OR FACE OF STUDS.

3. STEEL ANGLES AND CHANNELS: FACE.

4. FLAT FRAMING: TOP OF STEEL OR TOP OF CONCRETE

E. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONAL CONTROL FOR THE FOLLOWING STRUCTURAL FEATURES, UNLESS DIMENSIONS ARE NOTED ON THE STRUCTURAL DRAWINGS:

1. PLAN LOCATION OF CHANGES IN ELEVATION OF TOP OF CONCRETE SLABS, INCLUDING DEPRESSIONS, STEPS, CURBS, AND TRENCHES.

2. LOCATION OF SLOPE BREAKS IN PLAN AND TOP OF SLAB PROFILE AT RAMPS AND SLOPED SLABS.

COORDINATION OF DOCUMENTS

A. ALTHOUGH WATERPROOFING AND DRAINAGE ITEMS ARE SOMETIMES PICTURED ON THE STRUCTURAL DRAWINGS FOR REFERENCE, THESE ITEMS ARE THE DESIGN RESPONSIBILITY OF OTHERS AND ARE DETAILED AND/OR SPECIFIED ELSEWHERE.

B. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATION AND DETAILS OF NON-BEARING INTERIOR AND EXTERIOR WALL CONSTRUCTION.

C. REFER TO ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR LOCATIONS AND SIZES OF THE FOLLOWING ITEMS:

1. ANCHOR BOLTS, INSERTS AND HANGERS FOR ATTACHMENT AND BRACING OF NONSTRUCTURAL

BUILDING COMPONENTS TO THE BUILDING STRUCTURE.

2. CONCRETE PADS AND CURBS FOR SUPPORT OF EQUIPMENT AND PIPING.

3. ITEMS EMBEDDED IN STRUCTURAL ELEMENTS, INCLUDING DRAINS, SLEEVES, CONDUITS, AND BOXES.

4. OPENINGS AND RECESSES IN SLAB.

5. ALL SECONDARY STEEL POSTS AND FRAMING MEMBERS NOT SHOWN ON THE STRUCTURAL DRAWINGS.

D. ITEMS THAT ARE NOT SHOWN ON STRUCTURAL DRAWINGS, BUT AFFECT STRUCTURAL ELEMENTS, SHALL BE SUBJECT TO LIMITATIONS OF THE STRUCTURAL DETAILS LISTED BELOW. EXCEPT AS APPROVED BY OWNER'S REPRESENTATIVE.

ITEM

DETAIL REFERENCE

PENETRATIONS THROUGH FOOTINGS AND GRADE BEAMS SMALL OPENINGS IN DECK AND CONCRETE FILL LARGE OPENINGS IN DECK AND CONCRETE FILL SUSPENDED LOADS FROM STEEL DECK

3/SS5-4 1/SS5-4 19/SS5-3

E. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATION AND DETAILS OF MISCELLANEOUS STEEL ITEMS, INCLUDING BUT NOT LIMITED TO:

1. FRAMING THAT SERVES SOLELY AS A COMPONENT OF NON-BEARING STUD WALL OR CURTAINWALL ASSEMBLY, INCLUDING JAMB FRAMING AT ROLL-DOWN DOORS, JAMB AND/ OR HEAD REINFORCEMENT AT OTHER STUD AND CURTAIN ASSEMBLIES, CANTILEVER FRAMING FOR SILLS AND PARTIAL HEIGHT

2. ORNAMENTAL METAL, INCLUDING RAILINGS, SUN CONTROL DEVICES, GREEN SCREENS AND TRELLISES.

DESIGN CRITERIA

A. APPLICABLE CODES: 2009 INTERNATIONAL BUILDING CODE; PHYSICAL SECURITIES DESIGN MANUAL FOR VA FACILITIES, JULY 2007; DEPARTMENT OF VETERANS AFFAIRS SEISMIC DESIGN MANUAL, H-18-8, FEBRUARY 2011

B. LIVE LOADS: 80 PSF REDUCIBLE PLUS 20 PSF NON-REDUCIBLE PARTITION LIVE LOAD TYPICAL AT FLOORS, 20 PSF REDUCIBLE TYPICAL AT ROOF, 50 PSF WITHIN FOOTPRINT OF ROOF MECHANICAL SCREEN.

C. WIND DESIGN PARAMETERS: 1. BASIC WIND SPEED: 85 MPH

2. EXPOSURE: C

3. IMPORTANCE FACTOR: Iw=1.15

OCCUPANCY CATEGORY: IV SEISMIC DESIGN CATEGORY: D IMPORTANCE FACTOR: I = 1.5 LONGITUDE: 38.6 NORTH LATITUDE: 121.3 WEST SITE CLASS: D

MAPPED MCE ACCLERATIONS: Ss = 0.464, S1 = 0.214 SITE COEFFICIENT AT SHORT T: Fa = 1.43. Fv = 1.97 ADJUSTED MCE SPECTRAL RESPONSE ACCELERATION PARAMETERS: SDS = 0.442

STRUCTURAL RESPONSE MODIFICATION FACTORS: R = 8 (SPECIAL MOMENT RESISTING FRAME)

D. SEISMIC DESIGN PARAMETERS FOR STRENGTH CHECKS:

 Ω o = 3

SD1 = 0.282

DESIGN BASE SHEAR: V = 0.08W

E. INTERSTORY SEISMIC DRIFT. THE MAXIMUM INTERSTORY DRIFT BETWEEN A LEVEL AND THE FLOOR BELOW IS AS FOLLOWS: 0.015H*1/2 WHERE H = STORY HEIGHT.

F. PERIMETER STEEL FRAMING DEFLECTION

1. UNDER POST-COMPOSITE DEAD LOAD AND DESIGN LIVE LOADS, PERIMETER BEAMS WILL DEFLECT A MAXIMUM OF 1/2".

FOUNDATION DESIGN CRITERIA:

A. BASED ON GEOTECHNICAL INVESTIGATION REPORT BY R+C ENTITLED "CONSOLIDATE/EXPAND MEDICAL PROCEDURES (CEMP), VA MATHER HEALTHCARE SERVICES, MATHER, SACRAMENTO COUNTRY, CALIFORNIA" DATED JANUARY 2, 2014.

CONCRETE

A. REINFORCING STEEL

1. ALL BARS, U.O.N.: ASTM A615, GR 60 OR ASTM A706, DEFORMED.

2. BARS TO BE WELDED: ASTM A706.

3. HEADED BARS:

a. WHERE HEADED BARS ARE SHOWN, CONFORM TO ASTM A970. b. HEADED BARS OR ICBO APPROVED MECHANICAL "TERMINATORS" WILL BE PERMITTED TO BE SUBSTITUTED FOR HOOKS AT OTHER LOCATIONS AT CONTRACTORS OPTION, SUBJECT TO APPROVAL OF OWNER'S REPRESENTATIVE.

B. MECHANICAL BAR SPLICES: COVER AND CLEARANCE REQUIREMENTS SHALL BE MAINTAINED AT BAR

1. WHERE MECHANICAL SPLICES ARE SHOWN, PROVIDE TYPE 2 COUPLERS U.O.N.

MECHANICAL SPLICES WILL BE PERMITTED AT OTHER LOCATIONS AT CONTRACTOR'S OPTION, SUBJECT TO APPROVAL OF OWNER'S REPRESENTATIVE FOR LOCATION AND TYPE OF COUPLER.

C. CONCRETE MIXES: SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

WEIGHT STRENGTH, Fc' GRADE BEAMS AND SPREAD FOOTINGS 4,000 PSI NORMAL CONCRETE SLAB ON GRADE, FILL ON DECK, CURBS, MECHANICAL PADS, STAIR FILLS NORMAL

STRUCTURAL STEEL

A. SHAPES AND PLATES

1. W-SHAPES: ASTM A992, U.O.N. ASTM 913, GR 65 AS DESIGNATED ON DRAWINGS.

2. ANGLES, CHANNELS, BENT PLATES AND FLAT BARS: ASTM A36, U.O.N.

3. PLATE: ASTM A572, GRADE 50 TYPICAL; ASTM A36 WHERE NOTED.

4. ROUND, SQUARE, AND RECTANGULAR TUBES: ASTM A500, GRADE B.

5. PIPES: ASTM A53, TYPE E, GRADE B, TYP. U.O.N. ASTM A53, TYPE S, GRADE B FOR AESS SHAPES.

1. HIGH STRENGTH BOLTS: ASTM A325, SLIP CRITICAL IN STANDARD HOLES, U.O.N. BOLTS ARE INSTALLED AS PRETENSIONED, U.O.N. IF CONTRACTOR CHOOSES TO USE TWIST-OFF TENSION-CONTROL TYPE BOLTS, ASTM F1852 MAY BE SUBSTITUTED FOR ASTM A325. TWIST-OFF BOLTS ARE NOT PERMITTED AT

MACHINE BOLTS AND THRU-BOLTS: ASTM A307.

3. STANDARD ANCHOR BOLTS: ASTM F1554, GRADE 36, U.O.N.

4. HIGH STRENGTH ANCHOR BOLTS: ASTM F1554, GRADE 105

C. WELDING

1. ELECTRODES: E70XX

2. SEISMIC CRITICAL WELDS: WELDS USED FOR CONNECTIONS IN THE SEISMIC LOAD RESISTING SYSTEM, INCLUDING COMPLETE PENETRATION, PARTIAL PENETRATION AND FILLET WELDS. SEE SPECIFICATIONS FOR REQUIREMENTS. EXCEPT AS SPECIFICALLY NOTED ON DRAWINGS, ALL WELDS AT THE FOLLOWING LOCATIONS SHALL BE CONSIDERED SEISMIC CRITICAL WELDS:

a. BRACED FRAME COLUMN SPLICES AND BASE PLATE CONNECTIONS. b. BRACED FRAME BEAM-TO-COLUMN CONNECTIONS.

c. BRACE CONNECTIONS, INCLUDING GUSSETS.

d. COLLECTOR BEAM END CONNECTIONS. e. CONNECTIONS AS DESIGNATED ON DRAWINGS.

3. DEMAND CRITICAL WELDS: ALL COMPLETE PENETRATION SEISMIC WELDS. SEE SPECIFICATIONS FOR REQUIREMENTS.

D. EXPANSION OR WEDGE ANCHORS: HILTI KWIK BOLT TZ EXPANSION ANCHOR, OR APPROVED EQUAL

E. U.O.N., STEEL ELEMENTS AT EXTERIOR LOCATIONS ARE HOT DIPPED GALVANIZED INCLUDING AESS CONNECTORS. AESS MEMBERS ARE NOT HOT-DIPPED GALVANIZED; SEE SPECIFICATIONS FOR PRIMER REQUIREMENTS. PROVIDE GALVANIZING RELIEF HOLES AS REQUIRED, AND FILL WITH FREEZE PLUGS.

STRUCTURAL STEEL FRAMING NOTES

A. CODE: COMPLY WITH ANSI / AISC 360 "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS", 2005, FOR ALL TOLERANCES, SPACINGS, MINIMUM WELD SIZES AND OTHER DETAILS NOT NOTED OR SHOWN.

B. CONNECTIONS: USE CONNECTIONS DESIGNATED AS "TYPICAL" WHERE SPECIFIC CONNECTION DETAILS ARE NOT CALLED OUT. WHERE GEOMETRY OR OTHER CONDITIONS VARY FROM CONDITIONS OF THE TYPICAL CONNECTIONS, PROVIDE SIMILAR CONNECTIONS OF EQUAL STRENGTH.

C. OPENINGS: FOR FRAMING AT OPENINGS NOT NOTED ON PLANS. SEE TYPICAL DETAILS.

D. COMPOSITE CONSTRUCTION: ALL STEEL BEAMS AND GIRDERS SHALL HAVE WELDED STUDS U.O.N. SEE PLAN SHEET NOTES & TYPICAL STEEL DETAILS.

E. FRAMING MEMBERS AT BUILDING PERIMETER ARE LOCATED AS DIMENSIONED ON PLAN FROM THE EDGE OF SLAB . FRAMING MEMBERS AT INTERIOR OPENINGS ARE LOCATED 8" FROM EDGE OF SLAB UNLESS SPECIFICALLY DIMENSIONED ON PLANS.

METAL DECK

A. FLOOR DECK: ASTM A653, SS, GRADE 33, GALVANIZED, MINIMUM YIELD 38 KSI.

B. ROOF DECK: ASTM A653, SS. GRADE 33, GALVANIZED, MINIMUM YIELD 38 KSI.

C. SHEAR CONNECTOR STUDS: AWS D1.1, AUTOMATICALLY END WELDED TO PROVIDE COMPLETE FUSION BETWEEN END OF STUD AND STEEL MEMBER, AS-WELDED SIZE AS NOTED.

CONTRACTOR FURNISHED DESIGN

A. THE CONTRACTOR SHALL EMPLOY A PROFESSIONAL ENGINEER, LICENSED IN THE STATE OF CALIFORNIA TO PREPARE A FULLY ENGINEERED DESIGN OF THE FOLLOWING ITEMS, IN ACCORDANCE WITH THE REFERENCED REQUIREMENTS. DRAWINGS, SPECIFICATIONS, AND CALCULATIONS SHALL BE STAMPED BY THE PROFESSIONAL ENGINEER.

CONTRACTOR DESIGN ITEMS

SPECIFICATION

DRAWING REFERENCE EXTERIOR CLADDING

ITEM

HAZARDOUS MATERIALS

A. RUTHERFORD & CHEKENE ASSUMES NO RESPONSIBILITY FOR THE MANAGEMENT OF HAZARDOUS MATERIALS THAT MAY BE ON THE SITE.

B. RUTHERFORD & CHEKENE HAS NOT PERFORMED INVESTIGATIONS TO DETERMINE THE PRESENCE OF HAZARDOUS MATERIALS. THE OWNER WILL PROVIDE THE RESULTS OF SUCH INVESTIGATIONS IF THEY HAVE BEEN PERFORMED.

C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT PERSONNEL WITHIN THE WORK AREA ARE PROTECTED FROM EXPOSURE TO HAZARDOUS MATERIALS. IF HAZARDOUS MATERIALS ARE DISCOVERED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER'S REPRESENTATIVE AND CEASE WORK UNTIL CONDITIONS CAN BE MAINTAINED IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS.

STRUCTURAL TESTING AND INSPECTION

A. THE FOLLOWING CHECKLISTS ARE TO ASSIST THE CONTRACTOR IN SCHEDULING OF TESTING AND INSPECTION RELATED TO STRUCTURAL FEATURES. THE WORK OF OTHER DISCIPLINES MAY REQUIRE TESTING AND INSPECTION THAT IS ADDITIONAL TO THE ITEMS LISTED BELOW.

B. REFER TO APPLICABLE PROVISIONS OF DIVISION 1 OF THE PROJECT SPECIFICATIONS AND THE GENERAL CONDITIONS OF THE CONTRACT FOR OWNER'S REPRESENTATIVE, TESTING LABORATORY, GEOTECHNICAL ENGINEER AND CONTRACTOR'S RESPONSIBILITIES REGARDING TESTING AND

C. REFER TO PROJECT SPECIFICATIONS FOR MORE DETAILED REQUIREMENTS FOR TESTS AND INSPECTIONS. THE PROJECT SPECIFICATIONS SHALL TAKE PRECEDENCE OVER THESE CHECKLISTS

D. SPECIAL INSPECTORS SHALL BE QUALIFIED BY TRAINING AND EXPERIENCE FOR THE REQUIRED INSPECTIONS AND MUST BE ACCEPTABLE TO THE OWNER'S REPRESENTATIVE. INSPECTORS SHALL THOROUGHLY REVIEW THE APPLICABLE PORTIONS OF THE DOCUMENTS. INSPECTORS SHALL PERFORM ALL DUTIES AND RESPONSIBILITIES AS REQUIRED BY IBC SECTION 1704.

SPECIAL INSPECTION CHECKLIST

ITEM	SPECIFICATION SECTION	NOTES
BUILDING PAD PREPARATION, GRADE BEAM EXCAVATION, AND FOOTING EXCAVATION		GEOTECHNICAL ENGINEER
PLACEMENT OF REINFORCEMENT, ANCHOR BOLTS, AND EMBEDS	033000, 051200	FINAL PLACEMENT
WELDING AND COUPLING OF REINFORCING	033000	CONTINUOUS
CONCRETE PLACEMENT	033000	CONTINUOUS
EXPANSION ANCHOR INSTALLATION	VARIOUS	PER ICC REPORT
STRUCTURAL STEEL WELDING	051200	CONTINUOUS
STRUCTURAL WELDING, SINGLE PASS FILLET NOT EXCEEDING 5/16"	051200	PERIODIC
STAIRS, RAILS, MISC. METAL WELDING	055000, 055100	PERIODIC
HIGH STRENGTH BOLTING	051200	PERIODIC
STEEL DECK / STUD WELDING	053600	PERIODIC
-		

E. MATERIAL TESTING: THE ITEMS INDICATED BELOW REQUIRE SAMPLING AND/ OR TESTING IN ACCORDANCE WITH PROVISIONS OF THE IBC AND REQUIREMENTS OF THE PROJECT SPECIFICATIONS.

1. ADDITIONAL SAMPLING AND TESTING WILL BE REQUIRED WHERE MATERIALS CANNOT BE POSITIVELY TRACED TO MILL CERTIFICATES.

	MATERIAL TESTING CHECKLIST		
ITEM	SPECIFICATION SECTION	NOTES	
FILL MATERIAL AND COMPACTION		GEOTECHNICAL ENGINEER	
CONCRETE	033000	SLUMP, STRENGTH, TEMP., AIF	
EXPANSION ANCHORS	VARIOUS	TORQUE OR PULL TEST	
GROUT, COMPRESSIVE STRENGTH	033000		
STRUCTURAL WELDING, COMPLETE JOINT PENETRATION	051200	UT	
OTHER STRUCTURAL WELDING	051200	MT	
AUTOMATIC STUD WELDING	053600	BEND TEST	
HIGH STRENGTH BOLTING	051200		

STRUCTURAL OBSERVATION

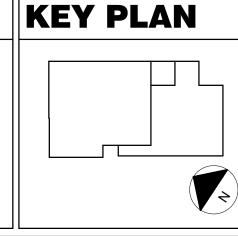
A. THE STRUCTURAL ENGINEER WILL GENERALLY REVIEW THE PROGRESS OF THE WORK IN ACCORDANCE WITH SECTION 17 OF THE IBC. BUT THIS REVIEW SHALL NOT BE CONSTRUED AS SPECIAL INSPECTION.

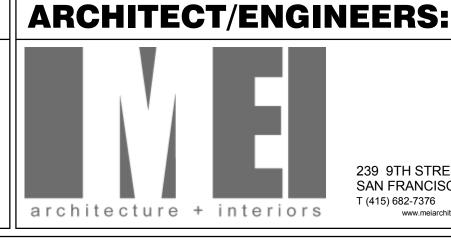
ssues & Revisions:

FORM 08-6231, OCT 1978

CONSULTANTS: T 415 568 4400 F 415 618 0684 www.ruthchek.com

Structural | Geotechnical 55 Second Street Suite 600 San Francisco CA 94105





239 9TH STREET, SUITE 201 SAN FRANCISCO, CA 94103 T (415) 682-7376 F (415) 682-7339

Drawing Title **CONSOLIDATE / EXPAND GENERAL NOTES** MEDICAL PROCEDURES MINOR (CEMP) Approved: Project Director **VANCHCS - MATHER, CA**

Building Number Prawing Number **SS0-2** HLB HLB Dwg. --

Project Number

612-111

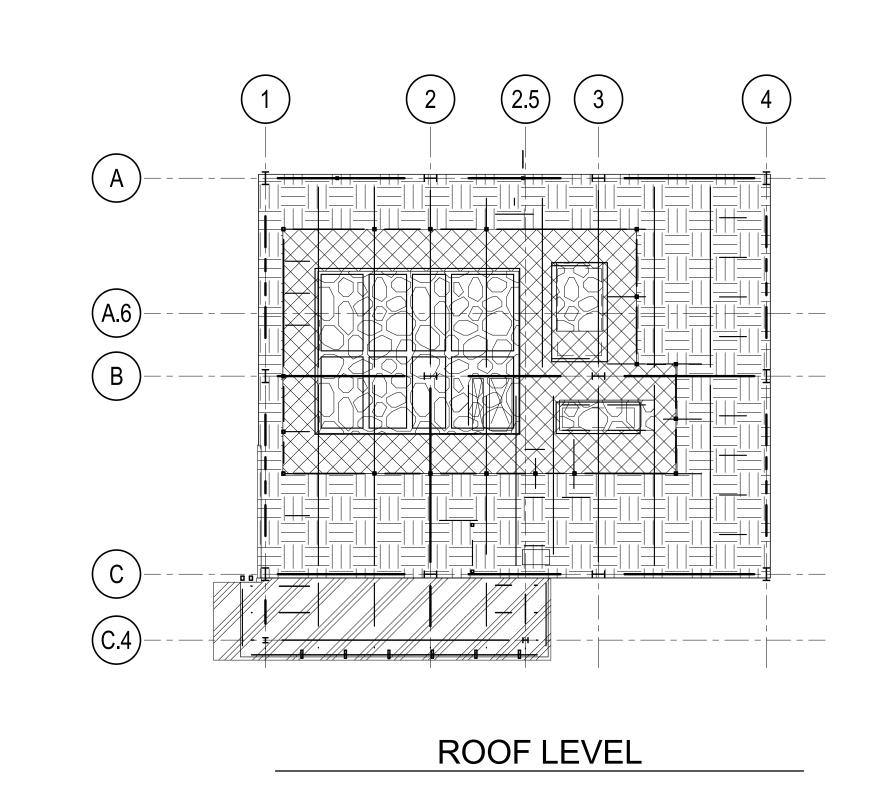
Office of **Facilities Management**

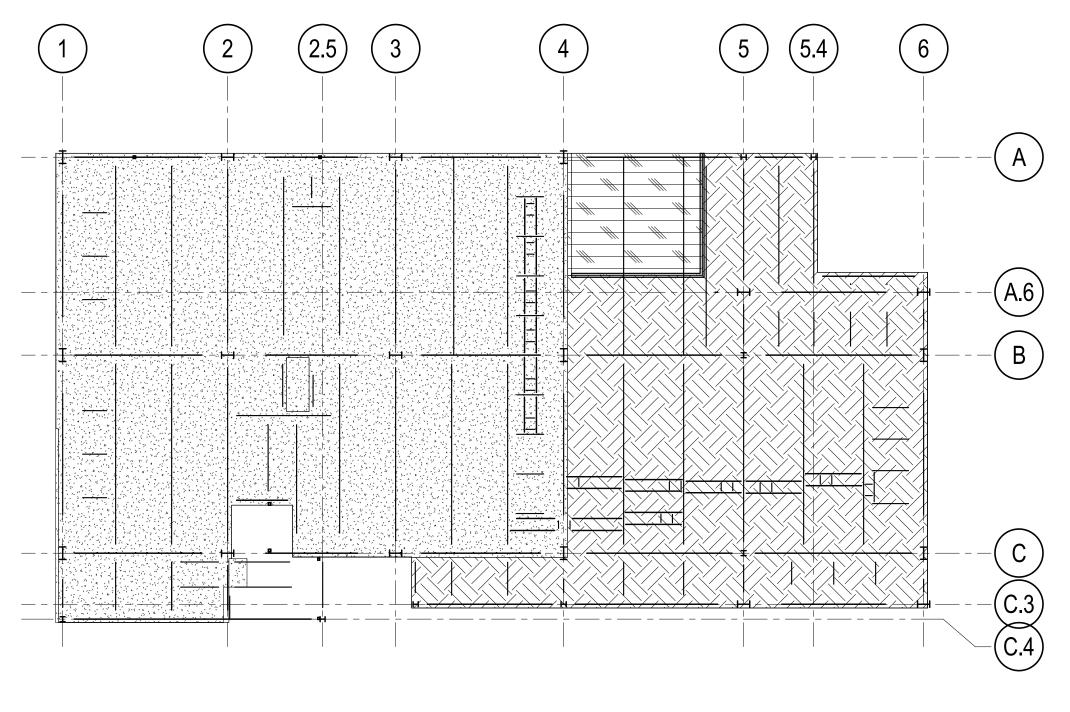
Department of

Veterans Affairs



APRIL 22, 2014





2ND FLOOR LEVEL

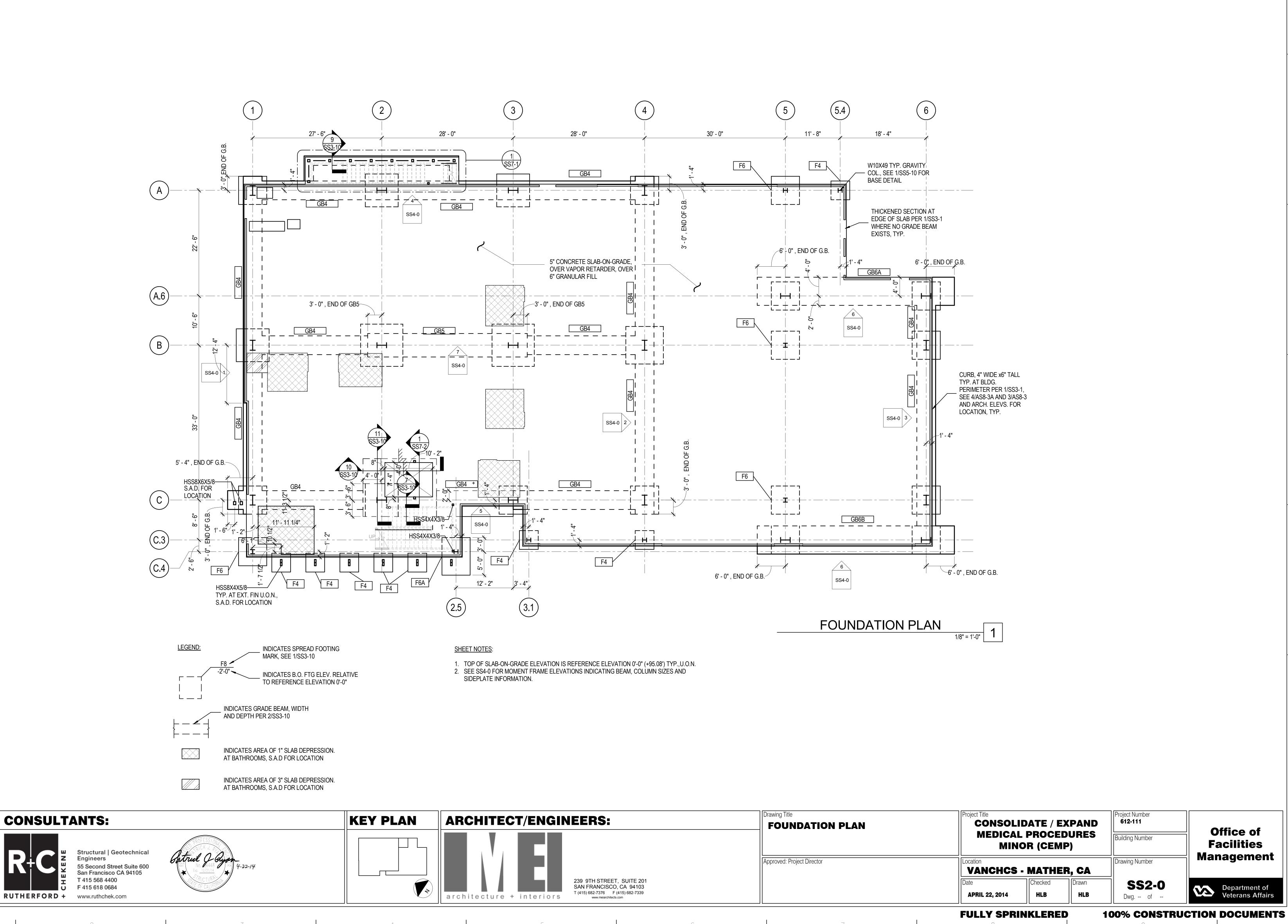
LOAD TABLES LEGEND

SYMBOL	FLOOR USAGE	LIVE LOAD	VIBRATION CRITERIA
	TYPICAL FLOOR	80 PSF RED. PLUS 20 PSF NON-RED. PARTITION LOAD	WALKING CRITERIA, ACCELERATION LIMIT OF 0.50% G
	BALCONY	100 PSF RED.	WALKING CRITERIA, ACCELERATION LIMIT OF 0.50% G
	HIGH ROOF AT MECH. EQUIP.	0 PSF AT FOOTPRINT OF UNITS	NONE
	HIGH ROOF AT METAL DECK	20 PSF RED.	NONE
	ROOF MECH SERVICE AREAS	50 PSF RED.	NONE
	HIGH ROOF AT CONRETE FILL	20 PSF RED.	NONE
	LOW ROOF	20 PSF RED.	NONE

	CONSULTANTS:	KEY PLAN	ARCHITECT/ENGINEERS:	Drawing Title LOADING PLANS	Project Title CONSOLIDATE / EXPAND	Project Number 612-111	
	W Structural Geotechnical				MEDICAL PROCEDURES MINOR (CEMP)	Building Number	Office of Facilities
	Engineers 55 Second Street Suite 600 San Francisco CA 94105 Struct O Supply No. 4448 Fxp. 12/31/14			Approved: Project Director	Location VANCHCS - MATHER, CA	Drawing Number	Management
Issues & Revisions:	Date T 415 568 4400 F 415 618 0684 RUTHERFORD + www.ruthchek.com		239 9TH STREET, SUITE 201 SAN FRANCISCO, CA 94103 T (415) 682-7376 F (415) 682-7339 www.meiarchitects.com		Date Checked Drawn APRIL 22, 2014 HLB HLB	SS1-0 Dwg of	Department of Veterans Affairs

1 2 5

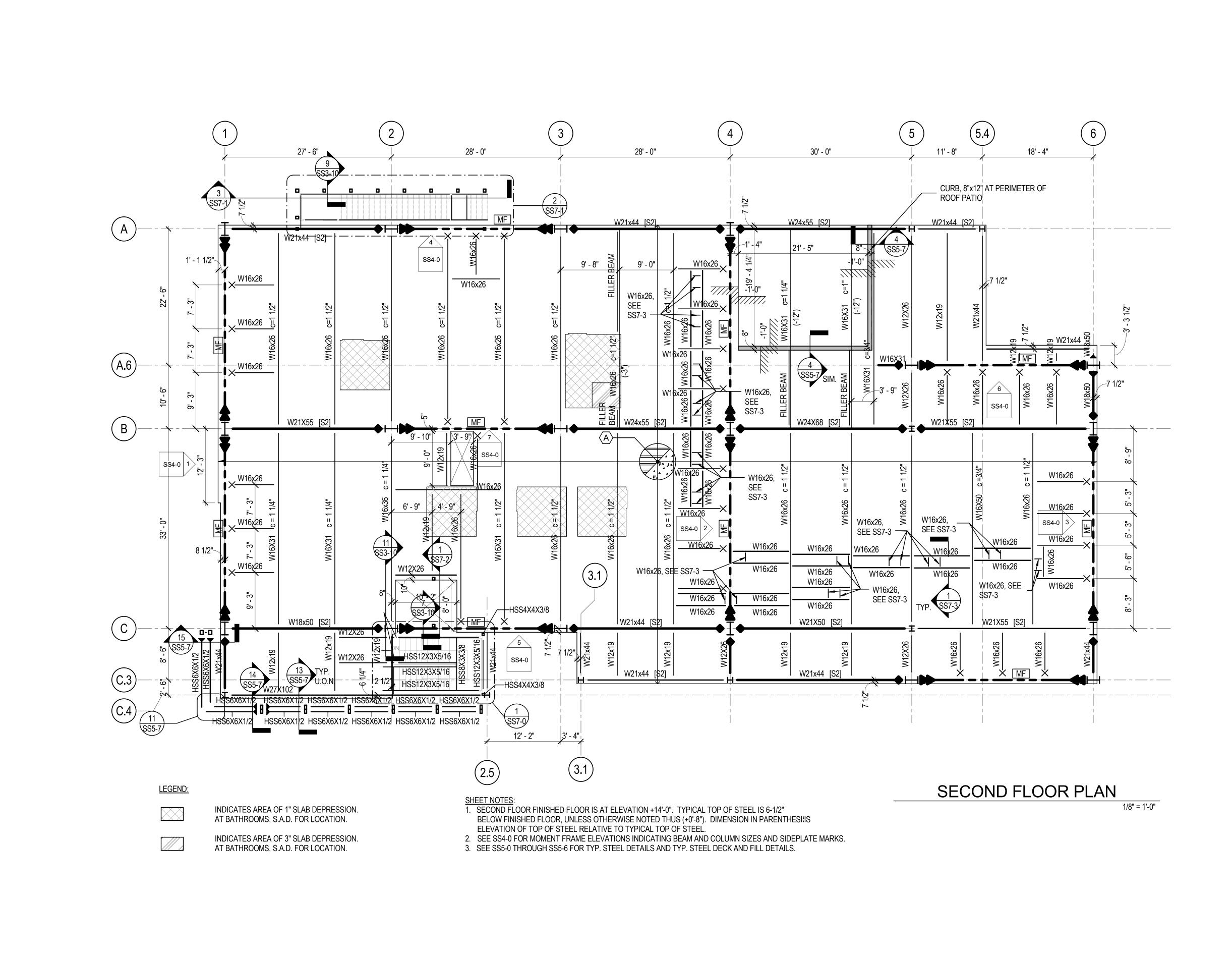
FULLY SPRINKLERED



Issues & Revisions:

VA FORM 08-6231, OCT 1978

5/8/2014 2:23:19 PM



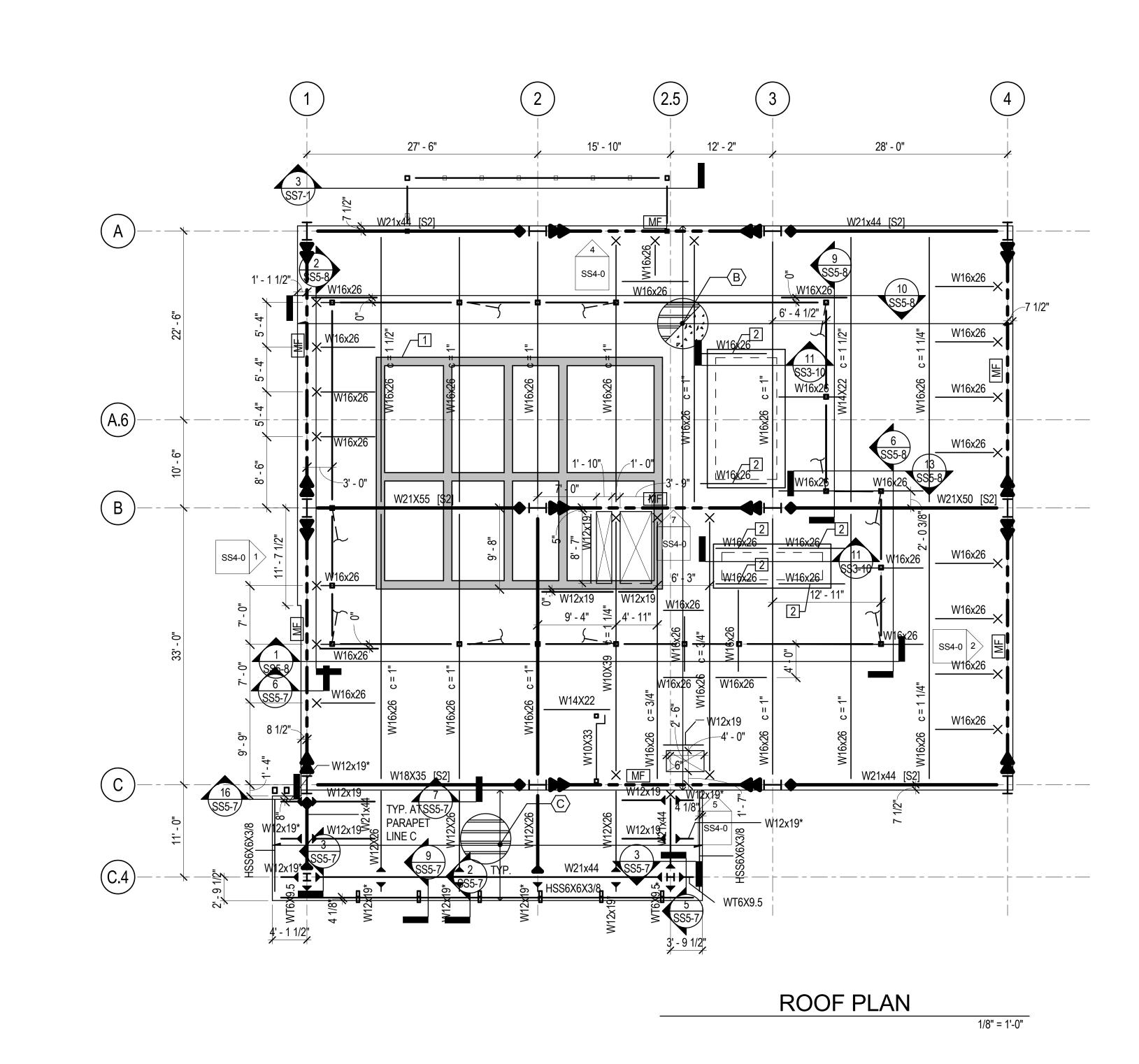
Project Title

CONSOLIDATE / EXPAND Drawing Title Project Number **612-111 KEY PLAN CONSULTANTS: ARCHITECT/ENGINEERS:** SECOND FLOOR PLAN Office of **MEDICAL PROCEDURES** Building Number **Facilities** MINOR (CEMP) Structural | Geotechnical Management Approved: Project Director Drawing Number 55 Second Street Suite 600 San Francisco CA 94105 T 415 568 4400 F 415 618 0684 **VANCHCS - MATHER, CA** 239 9TH STREET, SUITE 201 SAN FRANCISCO, CA 94103 T (415) 682-7376 F (415) 682-7339 www.meiarchitects.com **SS2-1** Department of Veterans Affairs HLB **APRIL 22, 2014** HLB RUTHERFORD + www.ruthchek.com Dwg. -- of --Issues & Revisions: 5/8/2014 2:23:19 PM

FULLY SPRINKLERED

100% CONSTRUCTION DOCUMENTS

VA FORM 08-6231, OCT 1978



INDICATES ROD BRACING AT

COPED W12 BEAM PER

MECH. SCREEN

INDICATES CURB BELOW AHU
PER 10/SS3-1. SEE MECH.
AND ARCH. DWGS FOR
LOCATIONS.

LEGEND:

W12X19*

VA FORM 08-6231, OCT 1978

5/8/2014 2:23:20 PM

INDICATES W BEAM
LOCATED BELOW MECH.
EQUIP CURB, COORDINATE
W/ MECH AND ARCH. DWGS
FOR LOCATIONS.

SHEET NOTES:

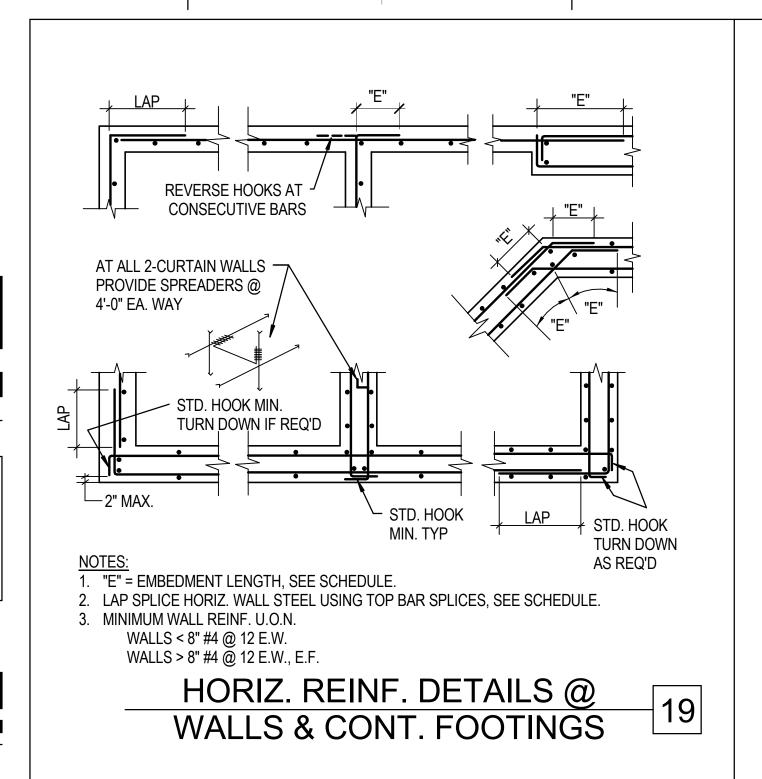
1. ROOF FINISHED FLOOR IS AT ELEVATION +28'-0". TYPICAL TOP OF STEEL IS 4-1/2"
BELOW FINISHED FLOOR, UNLESS OTHERWISE NOTED THUS (+0'-8"). DIMENSION IN PARENTHESIS
IS ELEVATION OF TOP OF STEEL RELATIVE TO TYPICAL TOP OF STEEL.

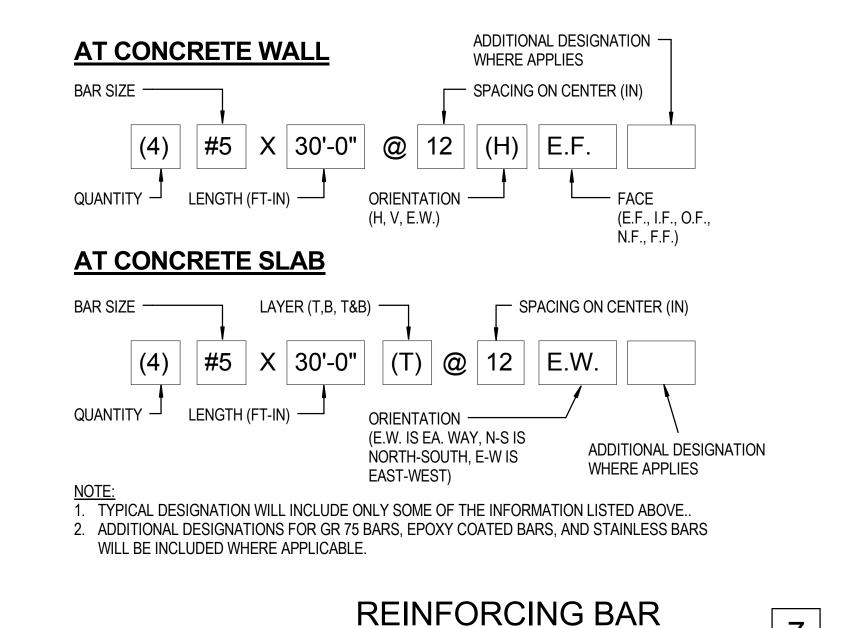
SEE SS4-0 FOR MOMENT FRAME ELEVATIONS INDICATING BEAM AND COLUMN SIZES AND SIDEPLATE MARKS.

3. SEE SS5-0 THROUGH SS5-6 FOR TYP. STEEL DETAILS AND TYP. STEEL DECK AND FILL DETAILS.

Drawing Title Project Title
CONSOLIDATE / EXPAND Project Number **612-111 KEY PLAN CONSULTANTS: ARCHITECT/ENGINEERS: ROOF PLAN** Office of **MEDICAL PROCEDURES** Building Number **Facilities** MINOR (CEMP) Structural | Geotechnical Engineers 55 Second Street Suite 600 San Francisco CA 94105 T 415 568 4400 F 415 618 0684 Management Approved: Project Director Drawing Number **VANCHCS - MATHER, CA** 239 9TH STREET, SUITE 201 SAN FRANCISCO, CA 94103 T (415) 682-7376 F (415) 682-7339 www.meiarchitects.com **SS2-2** Department of Veterans Affairs **APRIL 22, 2014** HLB HLB RUTHERFORD + www.ruthchek.com Dwg. -- of --Issues & Revisions:

FULLY SPRINKLERED

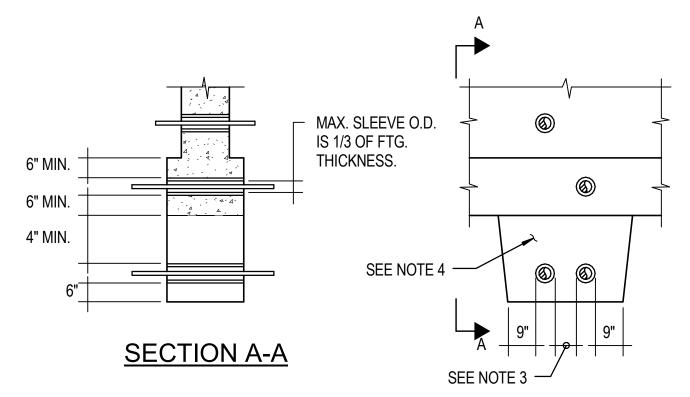




DESIGNATIONS

MINIMUM CONCRETE COVER FOR REINFORCING STEEL (FROM SURFACE OF CONCRETE TO SURFACE OF STEEL) SURFACE CAST AGAINST EARTH SURFACE EXPOSED TO EARTH OR WEATHER NO. 6 AND LARGER BAR NO. 5 AND SMALLER BAR OR WWF. SURFACE NOT EXPOSED TO EARTH OR WEATHER STRUCTURAL SLAB OR WALLS NO. 7 AND LARGER COLUMN TO SPIRAL OR TIES SHOTCRETE WALL AT FORMED FACE

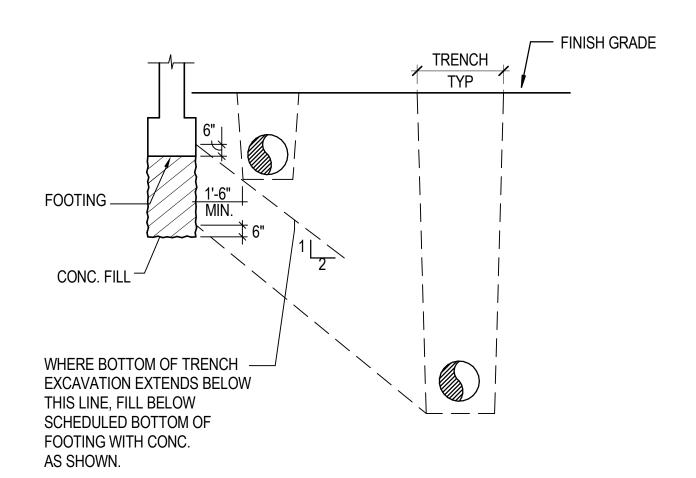
CONCRETE PROTECTION FOR REINFORCING STEEL 6



PERPENDICULAR TO FOOTINGS

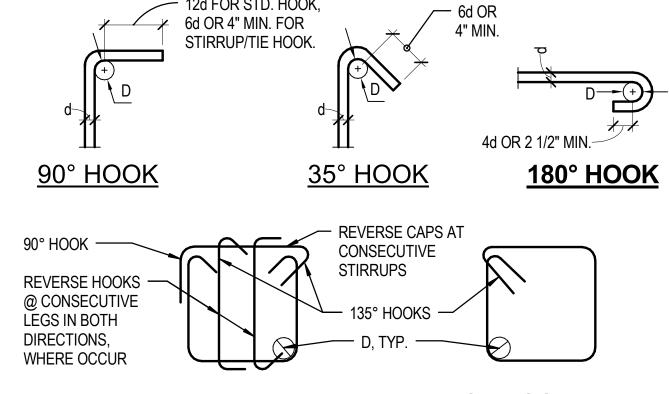
- 1. DO NOT PASS PIPES UNDER OR THROUGH ISOLATED SPREAD FOOTINGS. 2. PROVIDE SLEEVES FOR ALL PIPES PASSING THROUGH CONCRETE WITH
- I.D. 2" LARGER THAN PIPE.
- 3. CLEARANCE BETWEEN ADJACENT SLEEVES SHALL BE NOT LESS THAN THE DIA. OF LARGER SLEEVE OR 6" MINIMUM.
- 4. FOR PIPES BELOW FOOTINGS OR GRADE BEAMS, EXCAVATE AS SHOWN AND FILL WITH CONCRETE PRIOR TO PLACING FOOTING OR GRADE BEAM.

5/8/2014 2:23:21 PM



PARALLEL TO FOOTINGS

PIPE PENETRATIONS AT FOOTINGS AND GRADE BEAMS 13



TYPICAL COLUMN TIE TYPICAL STIRRUP **OR CLOSED STIRRUP**

ON DRAWINGS.

- 1. BEND DIAMETER "D" SHALL CONFORM TO CBC SECTION 1907. 2. PROVIDE MINIMUM HOOK LENGTHS UNLESS LONGER LENGTHS
- ARE SHOWN ON DRAWINGS. 3. BAR, STIRRUP AND TIE CONFIGURATION SHALL BE AS SHOWN

TYPICAL REINF. BAR HOOKS,
BENDS, STIRRUPS AND TIES^{1:1} 5

REINFORCING BAR LAP SPLICE (inches)											
BAR LAP SPLICE	MIN F'c (PSI)	BAR POSITION	#3	#4	#5	#6	#7	#8	#9	#10	#11
	3,000	TOP	29	38	47	56	82	94	106	119	132
	3,000	OTHER	22	29	36	43	63	72	81	91	101
	4,000	TOP	25	33	41	49	71	81	91	103	114
LAP SPLICE,	5,000	OTHER	19	25	31	37	54	62	70	79	87
TYPICAL U.O.N.		TOP	23	30	37	45	64	73	82	93	102
		OTHER	17	23	28	34	49	56	63	71	78
		TOP	21	28	34	41	59	67	75	84	93
	0,000	OTHER	16	21	26	31	45	51	57	64	71
LAP SPLICE,	4,000	TOP	33	43	55	65	94	108	121	137	151
LIGHT WEIGHT CONC.		OTHER	25	33	42	50	72	83	93	105	116
LAP SPLICE,	4 000	TOP	32	41	51	62	89	102	114	128	142
GRADE 75 BARS	4,000	OTHER	24	31	39	47	68	78	87	98	109
LAP SPLICE,	5,000	TOP	29	39	48	57	83	95	107	121	133
EPOXY COATED BARS	5,000	OTHER	25	34	42	50	73	83	94	106	117
SHORT LAP SPLICE	4,000	TOP	21	21	25	30	43	49	55	62	69
(SEE NOTE L4)	NW	OTHER	16	16	19	23	33	37	42	47	53

NOTES:

- L1. LAP SPLICE LENGTHS ARE FOR NORMAL WEIGHT CONCRETE (UNIT WEIGHT GREATER THAN 145 PCF), U.O.N.
- L2. TYPICAL LAP SPLICE REQUIRES MINIMUM CLEAR OF 1 BAR DIA. AND MINIMUM CLEAR SPACING BETWEEN LAPPED BARS OF 2 BAR DIA. STAGGER LAP SPLICES OF ADJACENT BARS WHERE NECESSARY TO ACHIEVE MINIMUM CLEAR SPACING BETWEEN LAPPED BARS.
- L3. AT COLUMNS CONFINED BY TIES AND SPLICED USING OFFSET SPLICES, MINIMUM CLEAR SPACING BETWEEN LAPPED BARS MAY BE REDUCED TO 1 1/2 BAR DIA.
- L4. WHERE BARS HAVE MINIMUM COVER OF 2 BAR DIA. AND THE CLEAR SPACING BETWEEN LAPPED BARS IS 4 BAR DIAS. MINIMUM, SHORT LAP SPLICES SHALL BE ALLOWED. (APPLIES ONLY TO NW CONCRETE AND GR 60 REINF.)
- L5. TOP BARS ARE HORIZONTAL BARS WITH 12 INCHES OR MORE OF CONCRETE PLACED BELOW.
- L6. SPLICE SHALL BE CONTACT LAP SPLICES, EXCEPT WHERE NONCONTACT SPLICES ARE INDICATED ON DRAWINGS. AT NONCONTACT SPLICES SPACE BARS MAXIMUM 1/5TH OF LAP LENGTH, 6 INCHES MAXIMUM ON CENTER.

REINFORCING BAR LAP SPLICES

REINFORCING BAR EMBEDMENT (inches)											
BAR EMBEDMENT	MIN F'c (PSI)	BAR POSITION	#3	#4	#5	#6	#7	#8	#9	#10	#11
-	2 000	TOP	23	29	37	43	63	72	81	91	102
	3,000	OTHER	17	22	28	33	48	55	62	70	78
	4.000	TOP	20	25	32	38	55	63	71	80	88
EMBEDMENT,	4,000	OTHER	15	19	24	29	42	48	54	61	67
TYPICAL UON.	F 000	TOP	17	23	29	34	50	56	63	71	78
	5,000	OTHER	13	17	22	26	38	43	48	54	60
	C 000	TOP	16	21	26	32	45	51	58	65	72
	6,000	OTHER	12	16	20	24	34	39	44	50	55
EMBEDMENT,	4,000	TOP	25	34	42	50	73	84	94	106	117
LIGHT WEIGHT CONC.		OTHER	19	26	32	38	56	64	72	81	90
EMBEDMENT,	4,000	TOP	24	32	39	47	68	78	88	99	110
GRADE 75 BARS		OTHER	18	24	30	36	52	60	67	76	84
EMBEDMENT,	5 000	TOP	23	30	37	45	64	73	82	92	102
EPOXY COATED BARS	5,000	OTHER	20	26	32	39	56	64	72	81	90
SHORT EMBEDMENT	4,000	TOP	16	16	20	24	33	38	43	49	54
(SEE NOTE E2)	ŃW	OTHER	12	12	15	18	25	29	33	37	41
HOOK EMBEDMENT	4,000										
HOOK ENIDEDINENT	NW		8	10	12	15	17	19	22	25	27
HEADED BAR	4,000										
EMBEDMENT	NW		6	8	10	12	14	16	18	20	22

NOTES:

Drawing Title

- E1. EMBEDMENT LENGTHS ARE FOR NORMAL WEIGHT CONCRETE (UNIT WEIGHT GREATER THAN 145 PCF), UON.
- E2. WHERE EMBEDDED BARS HAVE A MINIMUM COVER OF 2 BAR DIA. AND THE CLEAR SPACING BETWEEN EMBEDDED BARS IS 4 BAR DIA. MINIMUM, SHORT EMBEDMENT LENGTH SHALL BE ALLOWED. (APPLIES ONLY TO NW CONCRETE AND GR 60 REINF.)
- E3. TOP BARS ARE HORIZONTAL BARS WITH 12 INCHES OR MORE OF CONCRETE PLACED BELOW.

TYPICAL CONCRETE DETAILS

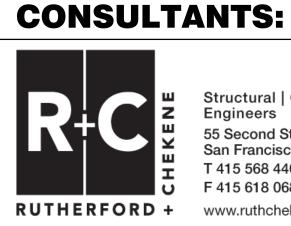
- E4. HOOK EMBEDMENT LENGTHS MAY BE MULTIPLIED BY 0.7 WHERE SIDE COVER IS 2 1/2" OR GREATER AND FOR 90-DEGREE HOOK THE COVER ON THE BAR EXTENSION IS AT LEAST 2".
- E5. HEADED BAR EMBEDMENT LENGTHS APPLY ONLY TO NW CONCRETE. CLEAR COVER TO BAR SHALL BE 2 BAR DIA. MINIMUM AND CLEAR SPACING

REINFORCING BAR EMBEDMENT

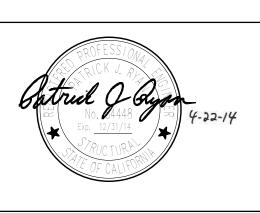
Project Number 612-111 CONSOLIDATE / EXPAND Office of MEDICAL PROCEDURES Building Number **Facilities** MINOR (CEMP) Management

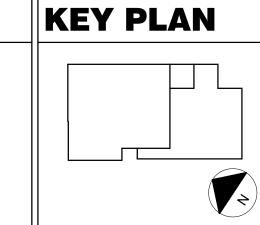
Dwg. -- of

ssues & Revisions:

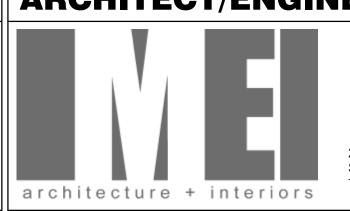


Structural | Geotechnical 55 Second Street Suite 600 San Francisco CA 94105 T 415 568 4400 F 415 618 0684 www.ruthchek.com









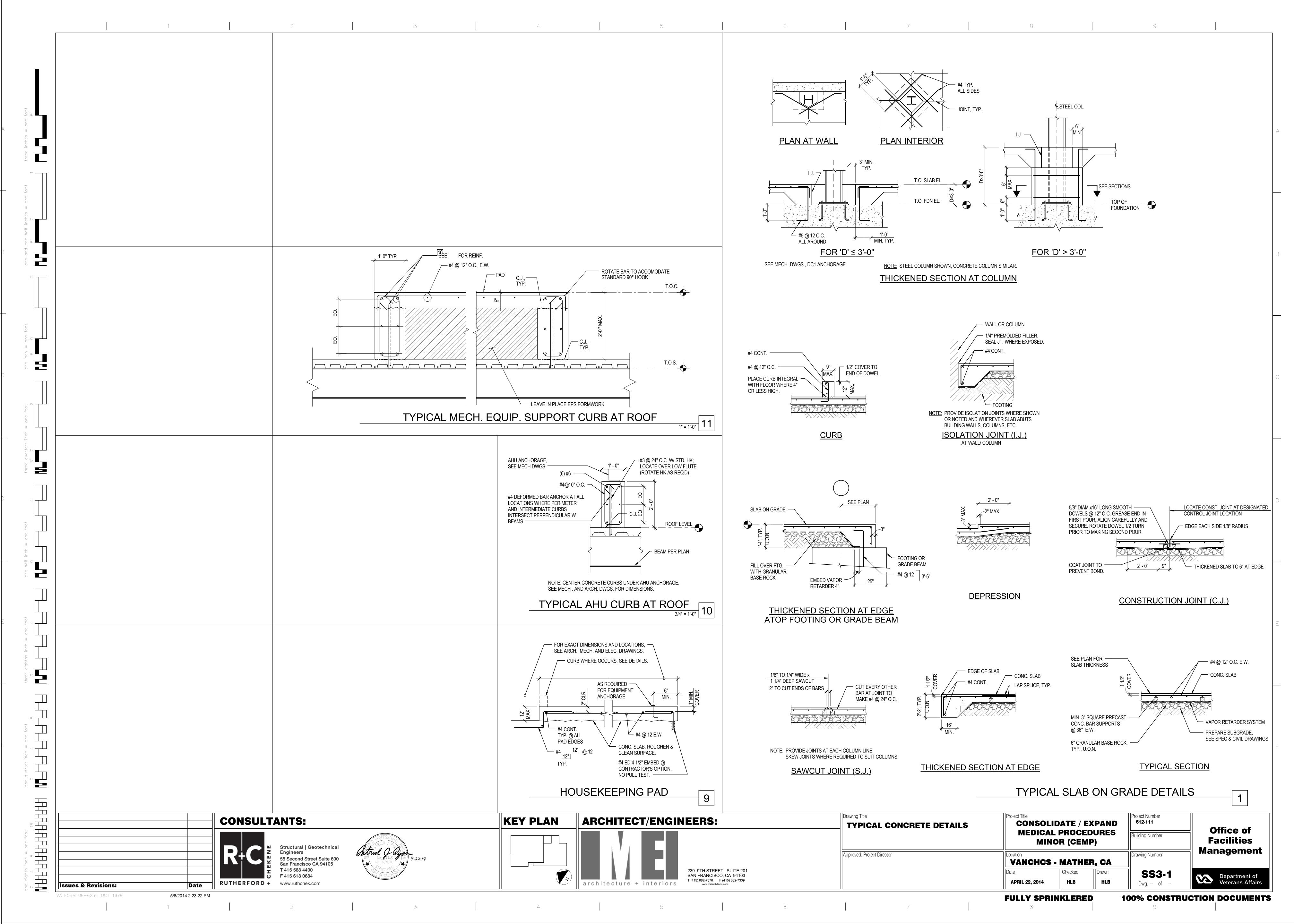


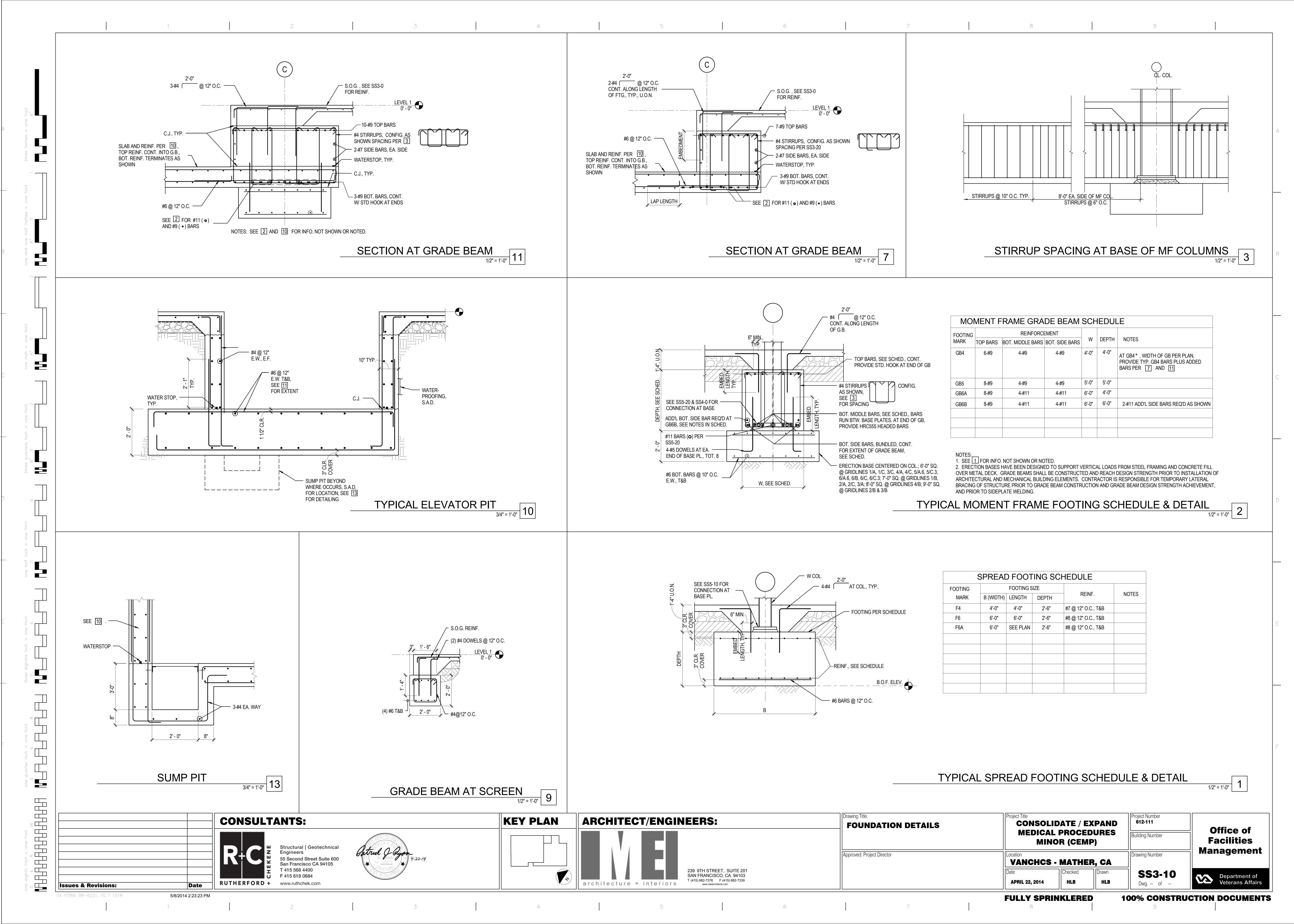


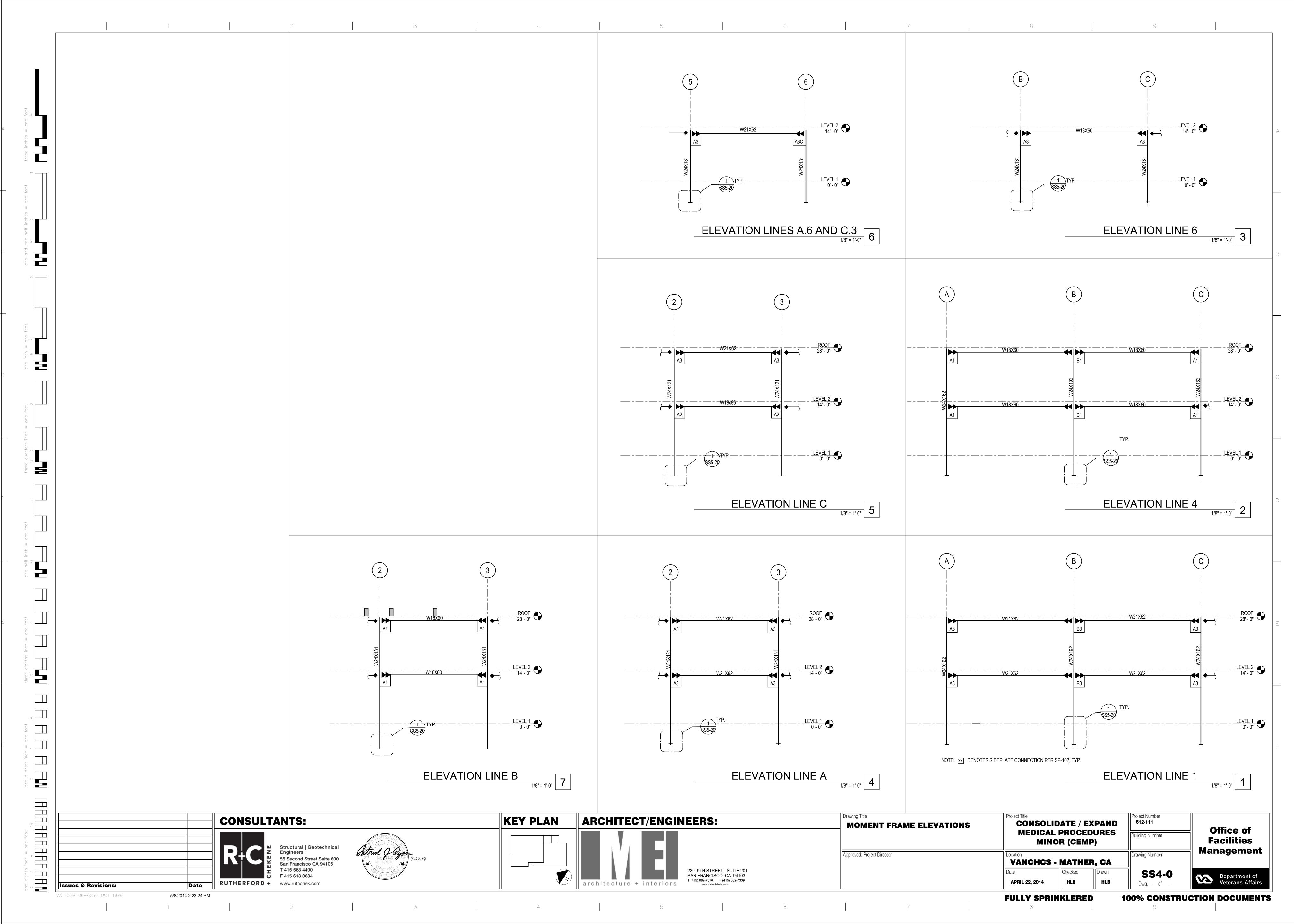
Drawing Number **SS3-0**

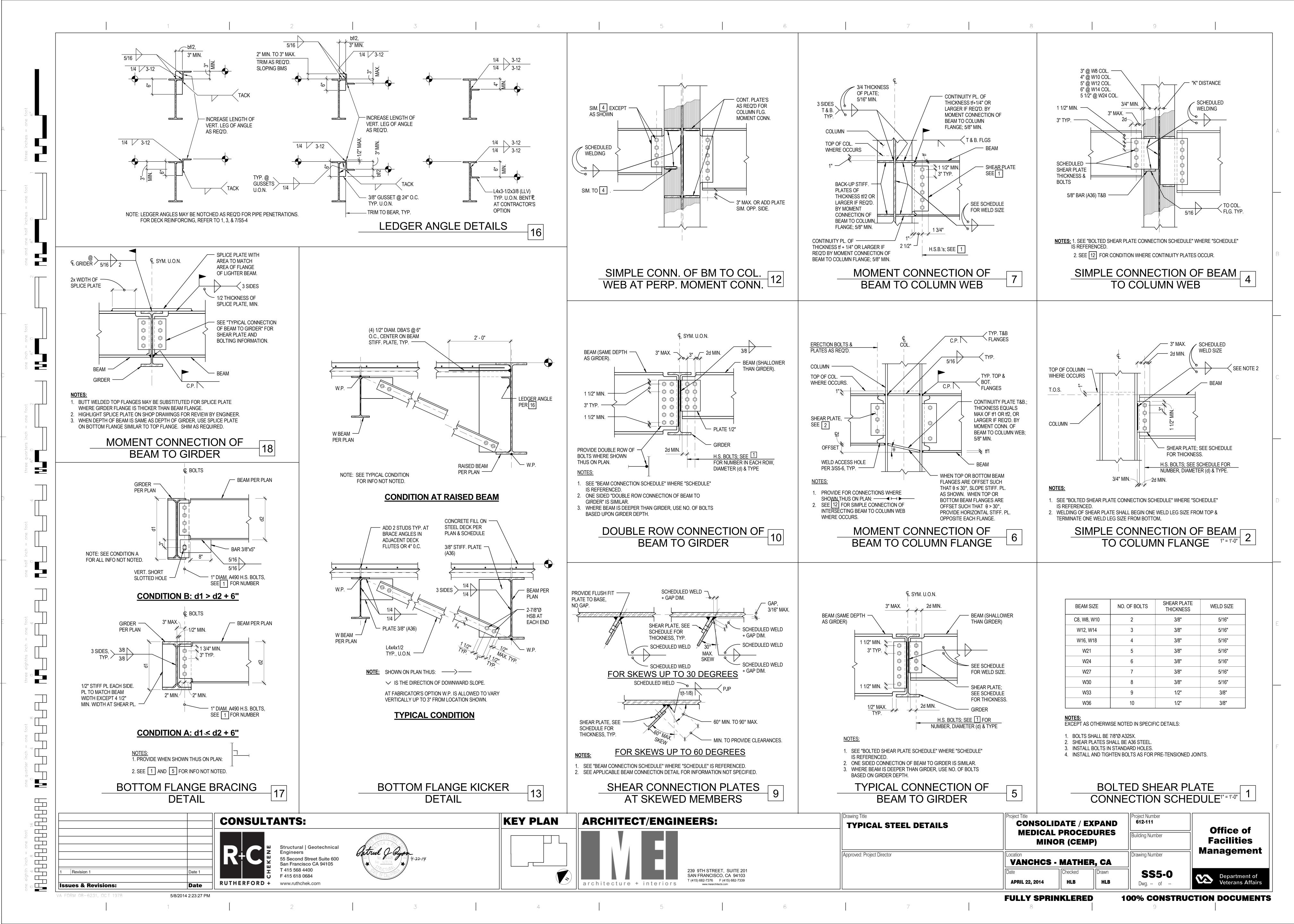
Department of Veterans Affairs

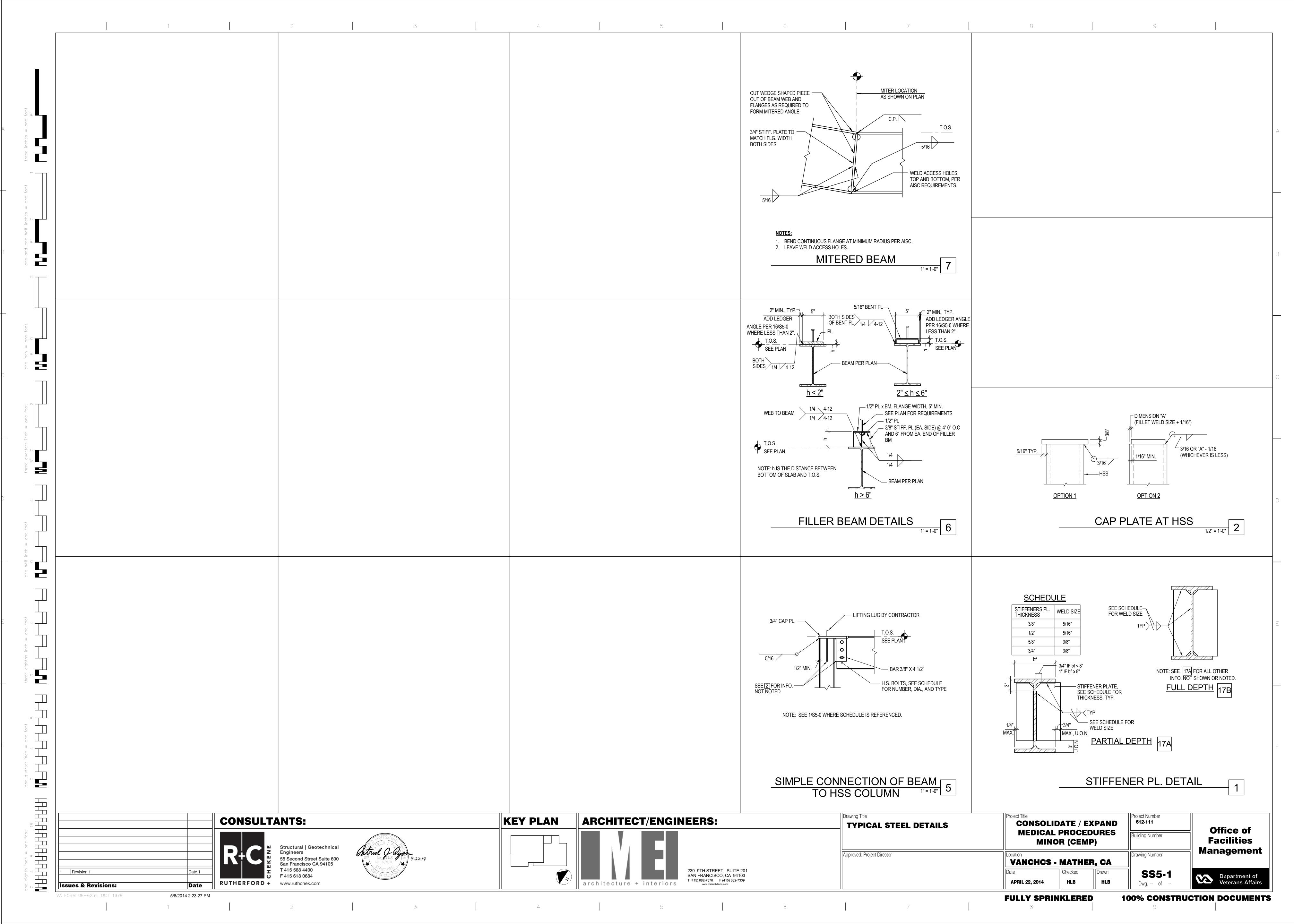
FULLY SPRINKLERED

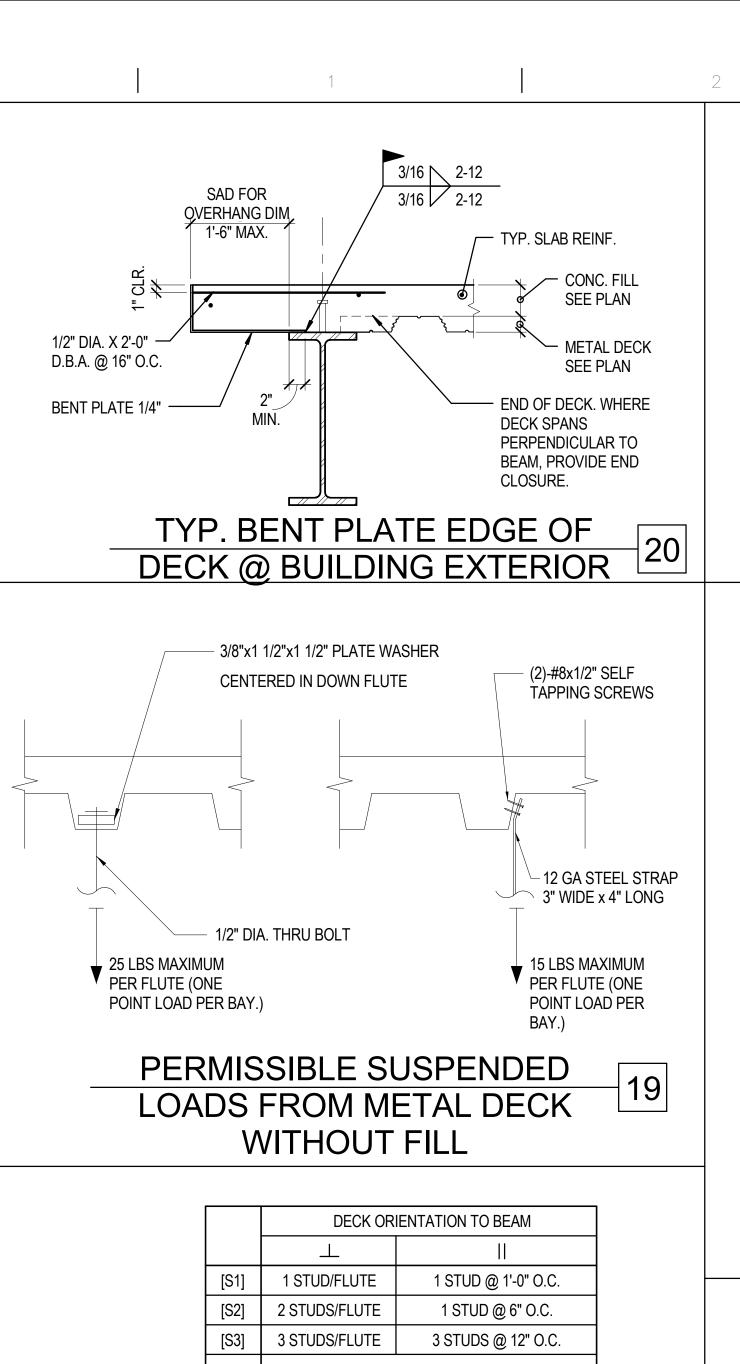


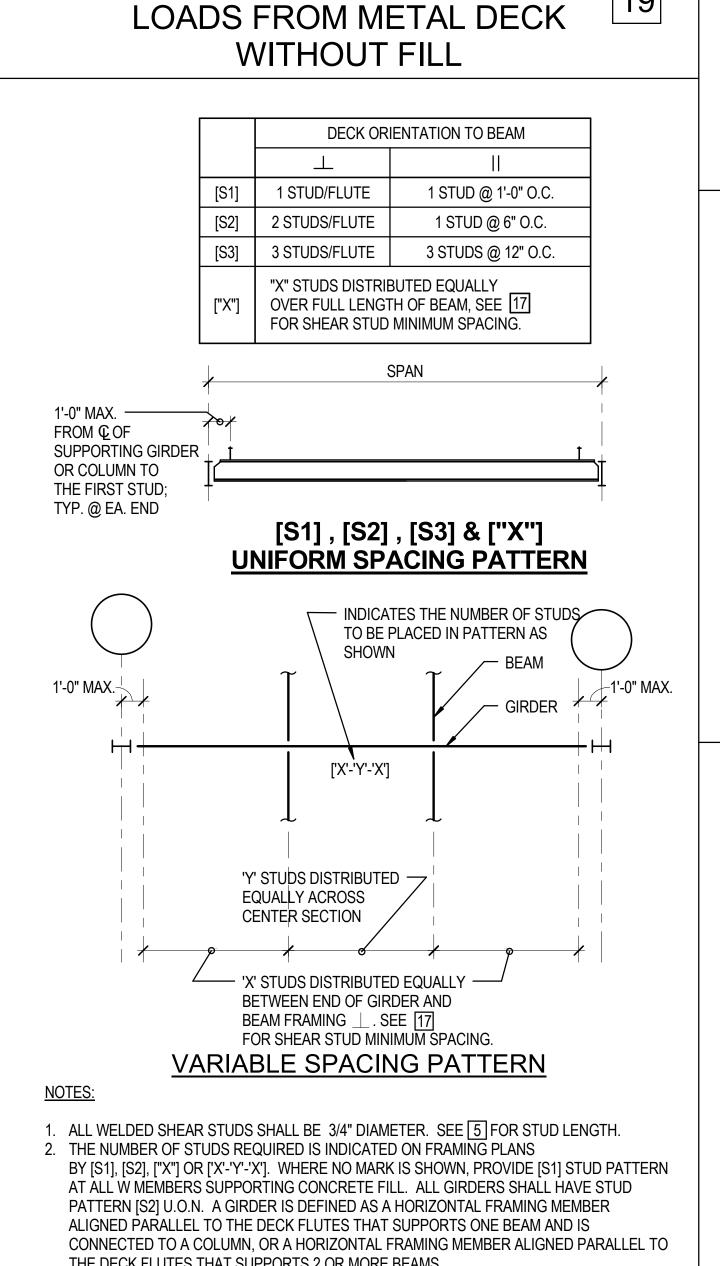








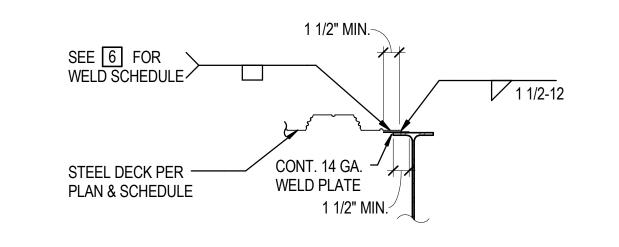




- THE DECK FLUTES THAT SUPPORTS 2 OR MORE BEAMS.
- 3. START STUDS 1'-0" MAX. FROM C.L. OF SUPPORTING GIRDER OR COLUMN. 4. WHEN THE NUMBER OF STUDS IN A SECTION CONFLICTS WITH THE PLAN CALLOUT, THE
- PLAN CALL-OUT GOVERNS
 5. SEE 17, 18, AND 19 FOR SHEAR STUD PLACEMENT.

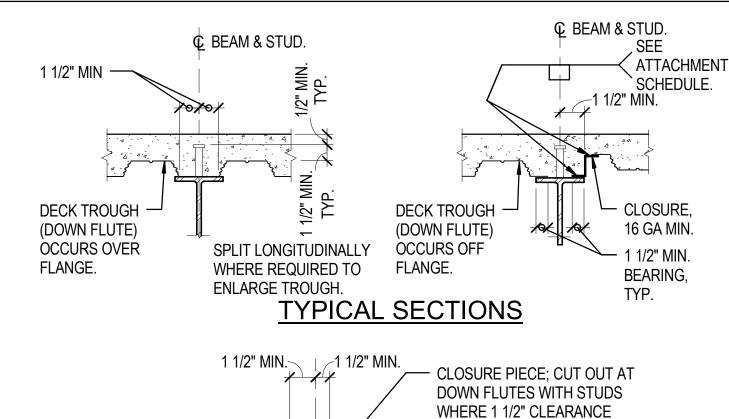
SHEAR CONNECTOR STUD 17 LAYOUT

5/8/2014 2:23:29 PM



NOTE: SEE ALSO NOTE #7 ON 1

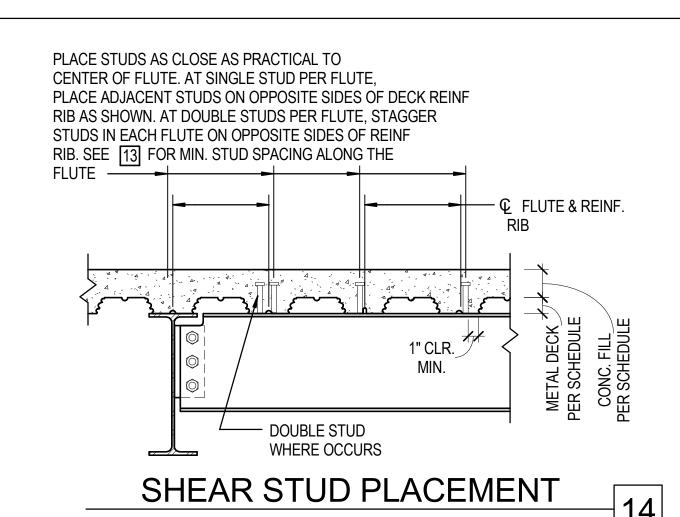
DECK SUPPORT WHERE SIDE BEARING IS LESS THAN 1 1/2" 16

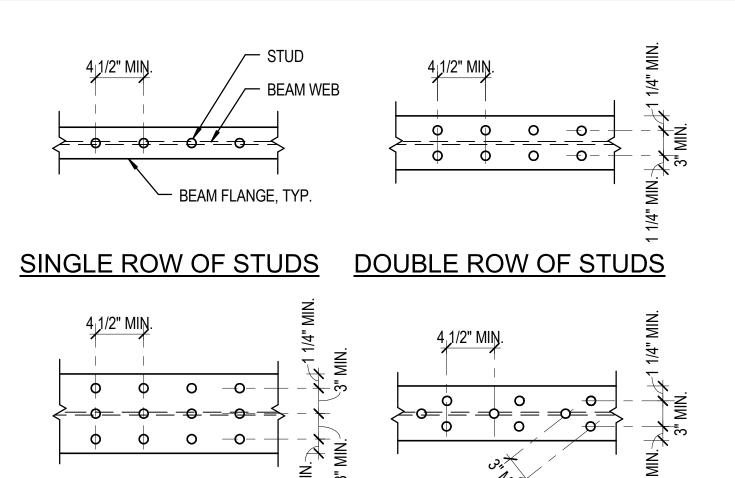


SECTION AT CHANGE OF DECK DIRECTION

DECK AND SHEAR STUD **PLACEMENT**

CANNOT BE PROVIDED.

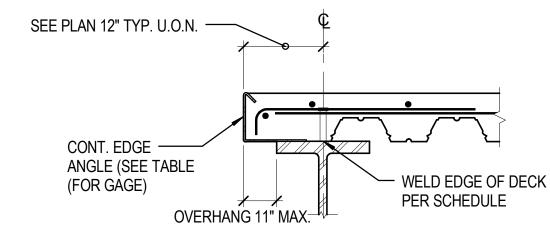


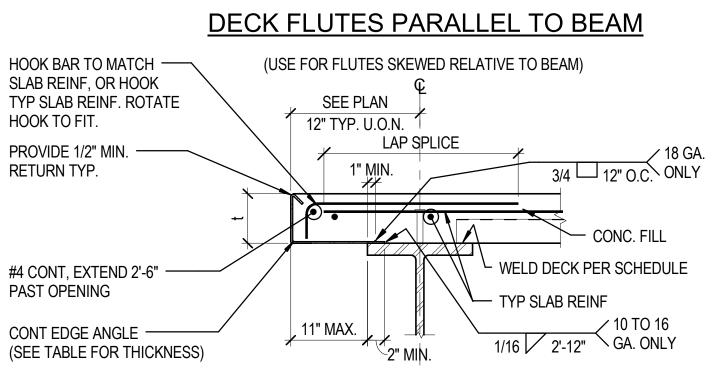


TRIPLE ROW OF STUDS

ALTERNATE TRIPLE ROW OF STUDS

SHEAR STUD MINIMUM SPACING





DECK FLUTES PERPENDICULAR TO BEAM

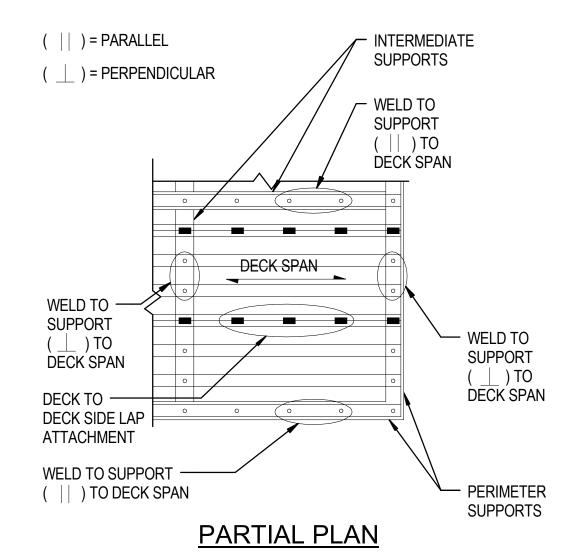
NOTE: HEADED STUDS NOT SHOWN

MAXIMUM OVERHANG EDGE ANGLE THICKNESS up to 16 GA 14 GA 12 GA 4 1/2" 5 1/2" 6 1/2" 7 1/2"

. WHEN OVERHANG EXCEEDS 11", SEE 20 . ROUND t UP TO NEAREST 1/2". FOR EXAMPLE WHERE t = 6 1/4" USE t = 6 1/2".

TYPICAL INTERIOR EDGE OF

DECK WITH CONCRETE FILL



ATTACHMENT TO SUPPORT PARALLEL DECK TO DECK TO SUPPORT PERPENDICULAR TO DECK RIBS TO DECK RIBS SIDE LAPS PUDDLE WELD ALL DOWN FLUTES | PUDDLE WELD @ 12" O.C. | 2'-0" O.C. (SEE NOTE 3) PUDDLE WELD ALL DOWN FLUTES | PUDDLE WELD @ 12" O.C. | 1'-0" O.C. (SEE NOTE 4)

NOTES:

- 1. ALL PUDDLE WELDS SHALL HAVE 1/2"Ø MIN. EFFECTIVE FUSION AREA
- 2. SHEAR STUDS WELDED THROUGH THE DECK, WITH A MINIMUM COVER 1" FROM THE EDGE OF THE DECK TO THE STUD CENTER LINE, MAY BE SUBSTITUTED ONE FOR ONE FOR A PUDDLE WELD. ALIGN AND SECURE DECK IN POSITION AS REQUIRED BEFORE INSTALLING
- 3. CONNECT SIDELAPS OF FLOOR DECK TO RECEIVE STRUCTURAL CONCRETE FILL USING TOP SEAM WELD OR APPROVED MANUFACTURER'S SPECIALTY SIDELAP CONNECTION.
- BUTTON PUNCH SHALL NOT BE PERMITTED. SEE SPECIFICATION FOR MORE INFO. 4. CONNECT SIDELAPS OF ROOF DECK, INCLUDING ROOF DECK TO RECEIVE INSULATING CONCRETE FILL, USING TOP SEAM WELDS AT SPACING DESIGNATED IN TABLE. SEE SPECIFICATION FOR MORE INFO.

DECK ATTACHMENT PATTERN

STEEL DECK ATTACHMENT SCHEDULE

MADIC	PROPER	RTIES	FILL ABOVE DECK		ATTA	CHMENT	REQ'D PROPERTIES OF DEC	K PLUS FILL ASSEMBLY	
MARK (SEE PLAN)	TYPE & GAGE	Imin (IN ⁴)	THICKNESS ABOVE DECK & FILL TYPE	REINFORCEMENT	STUD LENGTH	PATTERN	ALLOWABLE SUPERIMPOSED LOAD	FIRE RATING	REMARKS
A	3W 18	1.203	3 1/2" NWC	#4 @ 12" O.C. E.W.	3/4" DIA x 5"	FD	250 PSF		SEE PLAN FOR ADD'L REINF. PER DETAIL 16/SS5-4, STUDS TO BE 3/4" DIA X 4" AT 1" DEPRESSIONS
B	2W 18	0.555	2 1/2" NWC	#4 @ 12" O.C. E.W.	3/4" DIA x 3 1/2"	FD	250 PSF		SEE PLAN FOR ADD'L REINF.
⟨C⟩	2W 18	0.555				RD			

- SEE PLAN FOR LOCATION OF DECK TYPE.
- SEE 6 FOR DECK ATTACHMENT.
 SEE 13 & 14 FOR SHEAR CONNECTOR STUD REQUIREMENTS.
 FILL THICKNESS IS MEASURED FROM TOP OF DECK. INCREASE FILL THICKNESS

ARCHITECT/ENGINEERS:

- AS REQUIRED TO COMPENSATE FOR DECK DEFLECTION. SEE SPECIFICATIONS.
- 5. ALLOWABLE SUPERIMPOSED LOAD VALUES ARE MINIMUM ICC VALUES FOR DECK OR DECK + CONCRETE FILL AS SHOWN ON CONTRACT DOCUMENTS. FOR DECK WITHOUT FILL, DEFLECTION SHALL NOT EXCEED L/240 FOR ALLOWABLE LOAD.

STEEL DECK AND CONC. FILL SCHEDULE

- REINF. PER PLAN AND 5 - CONCRETE FILL, PER 5 — STEEL DECK PER PLAN & 5 SEE PLAN CENTER BARS -OVER DECK DOWN FLUTES REINF. PER — PLAN AND 5 CONCRETE FILL, PER 5 STEEL DECK PER PLAN AND WHERE NOTED REINFORCING FOR CONC. FILL

OVER STEEL DECK

REMARKS **VENTED COMPOSITE** FLOOR DECK **VENTED COMPOSITE** FLOOR DECK ROOF DECK PROVIDE VENTED DECK AS REQUIRED BY SPECIFICATIONS **ROOF DECK** 2' - 0"

REFER TO 5 FOR USE

STEEL DECK PROFILES

, 3

NOTES:

- 1. SEE SPECIFICATIONS AND "GENERAL NOTES" SHEET S0-2 FOR ADDITIONAL INFORMATION.
- 2. SEE PLANS FOR TYPE, EXTENT, DIRECTION OF DECK, AND THICKNESS OF CONCRETE FILL OVER DECK. S.A.D. FOR EDGE DISTANCES AND FOR LOCATIONS AND SIZES OF OPENINGS, DROPS, CURBS, DEPRESSIONS AND OTHER NON-TYPICAL CONDITIONS.
- 3. U.O.N. ON PLANS OR IN DECK SPECIFICATIONS, THE DETAILS AND NOTES ON THIS SHEET SHALL BE INCORPORATED INTO THE PROJECT AT ALL LOCATIONS WHERE STEEL DECK IS USED, WHETHER SPECIFICALLY CALLED OUT OR NOT.
- 4. WHEREVER POSSIBLE, DECK LAYOUT SHALL PROVIDE SHEETS OF SUFFICIENT LENGTH TO CONTINUOUSLY SPAN AT LEAST THREE SPANS ENDS SHALL TERMINATE OVER A SUPPORT PERPENDICULAR TO THE DECK SPAN, EXCEPT AT OPENINGS OR BUILDING EDGES WHERE DECKS MAY BE CANTILEVERED AS PER DETAILS.
- WHEN DECK IS CONTINUOUS OVER TWO SPANS, DECK DOES NOT REQUIRE VERTICAL SHORING DURING CONCRETE FILL PLACEMENT. FOR OTHER LAYOUTS, INCLUDING CANTILEVERED EDGES, SHORE DECK AS REQUIRED BY MANUFACTURER. SHORING SHALL BE SUPPORTED ON THE FRAMING THAT SUPPORTS THE DECK, NOT TO THE FLOOR OR GROUND BELOW.
- 6. DECK SHALL HAVE A MINIMUM OF 2" BEARING AT ALL SUPPORTING MEMBERS PERPENDICULAR TO DECK SPAN AND 1 1/2" AT ALL MEMBERS PARALLEL TO DECK SPAN.
- 7. WHERE TWO ADJACENT DECK SHEETS ARE SUPPORTED BY ONE FRAMING MEMBER. EACH SHEET SHALL INDIVIDUALLY SATISFY THE REQUIREMENTS OF NOTE 6 AND OF THE ATTACHMENT SCHEDULE, DETAIL 6
- 8. LIGHTS, DUCTS AND OTHER ITEMS, EXCEPT ACOUSTIC TILE CEILING. SHALL NOT BE SUPPORTED FROM STEEL DECK WITHOUT CONCRETE FILL LIGHTS, DUCTS AND OTHER ITEMS, EXCEPT ACOUSTIC TILE CEILINGS, SHALL NOT BE SUPPORTED FROM STEEL DECK WITH CONCRETE FILL UNLESS APPROVED BY ARCHITECT. ANCHORAGE OF APPROVED ITEMS MUST CONFORM WITH DECK MANUFACTURER'S RECOMMENDATIONS.
- 9. CONDUITS OR PIPES ARE NOT PERMITTED IN CONCRETE FILL OVER STEEL DECK.
- 10. STEEL DECK SUPPLIER SHALL DETERMINE THE LAYOUT OF DECKING SHEETS TO PROVIDE THE BEARING REQUIRED AND ALLOW FOR INSTALLATION OF SHEAR STUDS. SUPPLIER SHALL CUT DECK AS REQUIRED FOR LAYOUT, AND PROVIDE ALL NECESSARY FORMING AND CLOSURE PIECES.

STEEL FLOOR DECK NOTES

Project Number

Building Number

SS5-3

Dwg. -- of

612-111

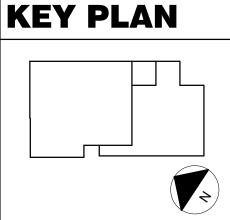
ssues & Revisions:

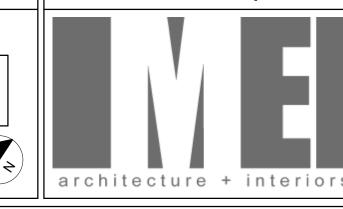
VA FORM 08-6231, OCT 1978

CONSULTANTS: RUTHERFORD +

Structural | Geotechnical Engineers 55 Second Street Suite 600 San Francisco CA 94105 T 415 568 4400 F 415 618 0684 www.ruthchek.com









239 9TH STREET, SUITE 201 SAN FRANCISCO, CA 94103 T (415) 682-7376 F (415) 682-7339

Drawing Title **TYPICAL COMPOSITE STEEL DECK-SLAB DETAILS** Approved: Project Director

CONSOLIDATE / EXPAND MEDICAL PROCEDURES MINOR (CEMP)

VANCHCS - MATHER, CA

HLB

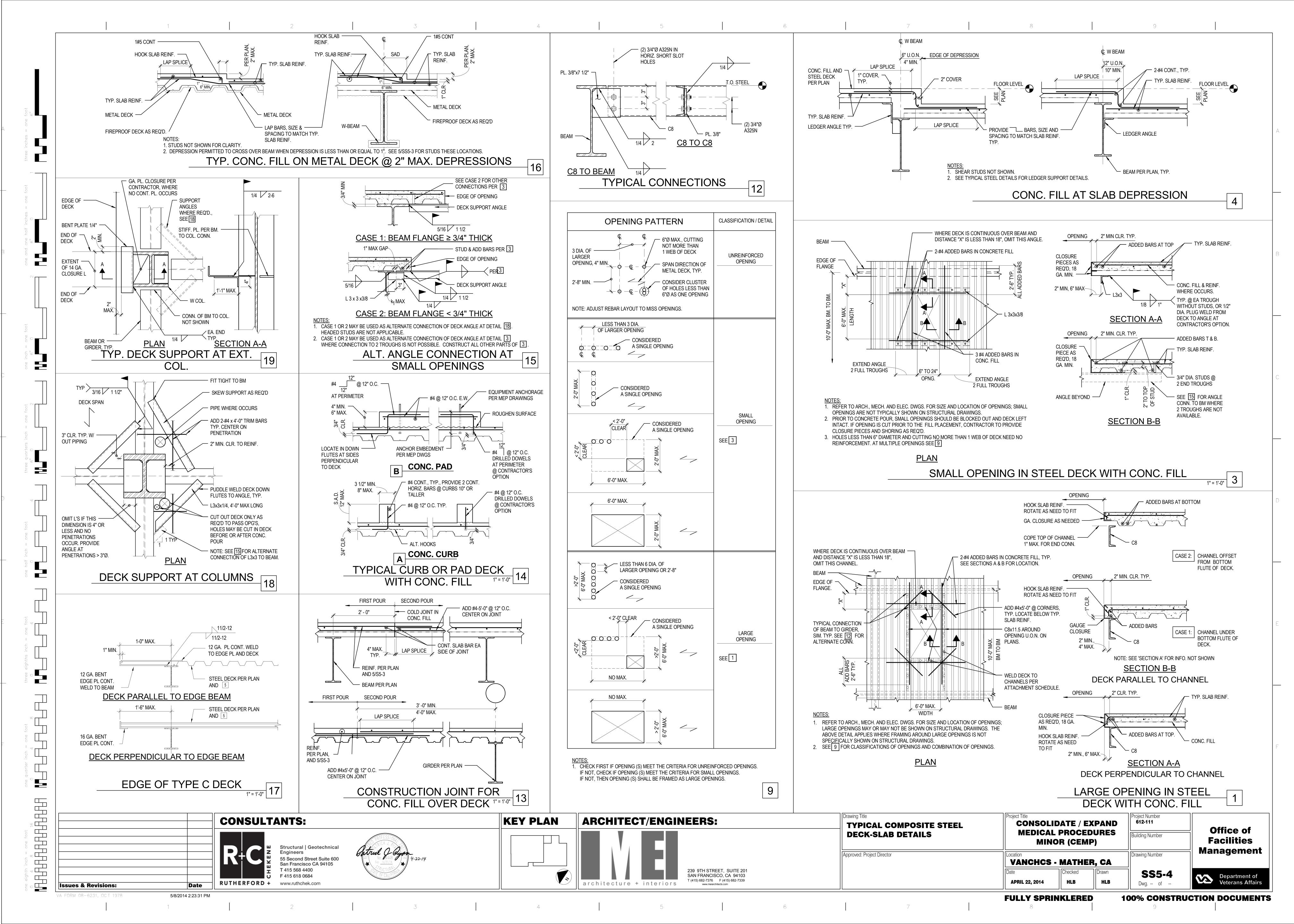
HLB

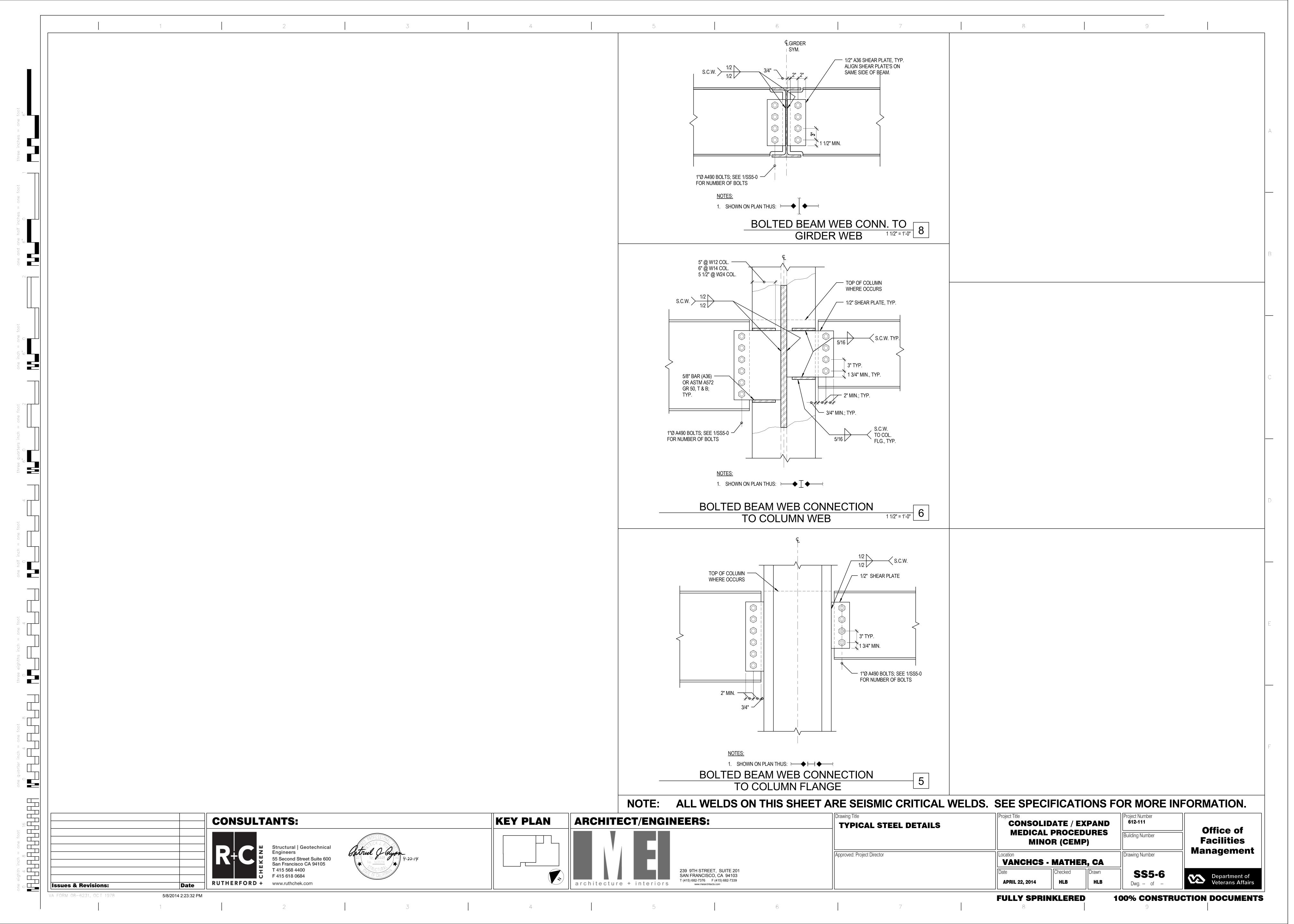
Office of **Facilities Management** Prawing Number

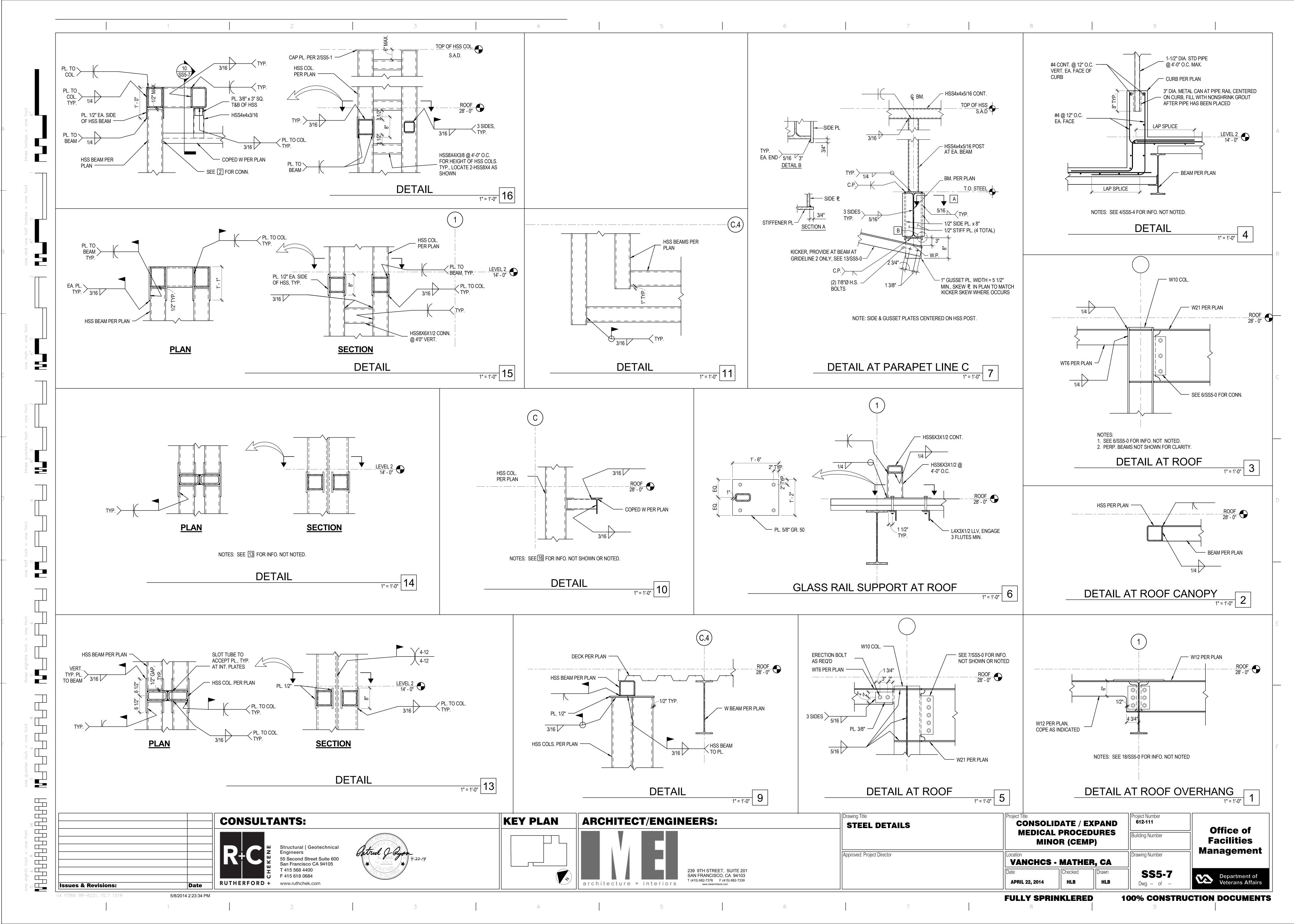
Department of Veterans Affairs

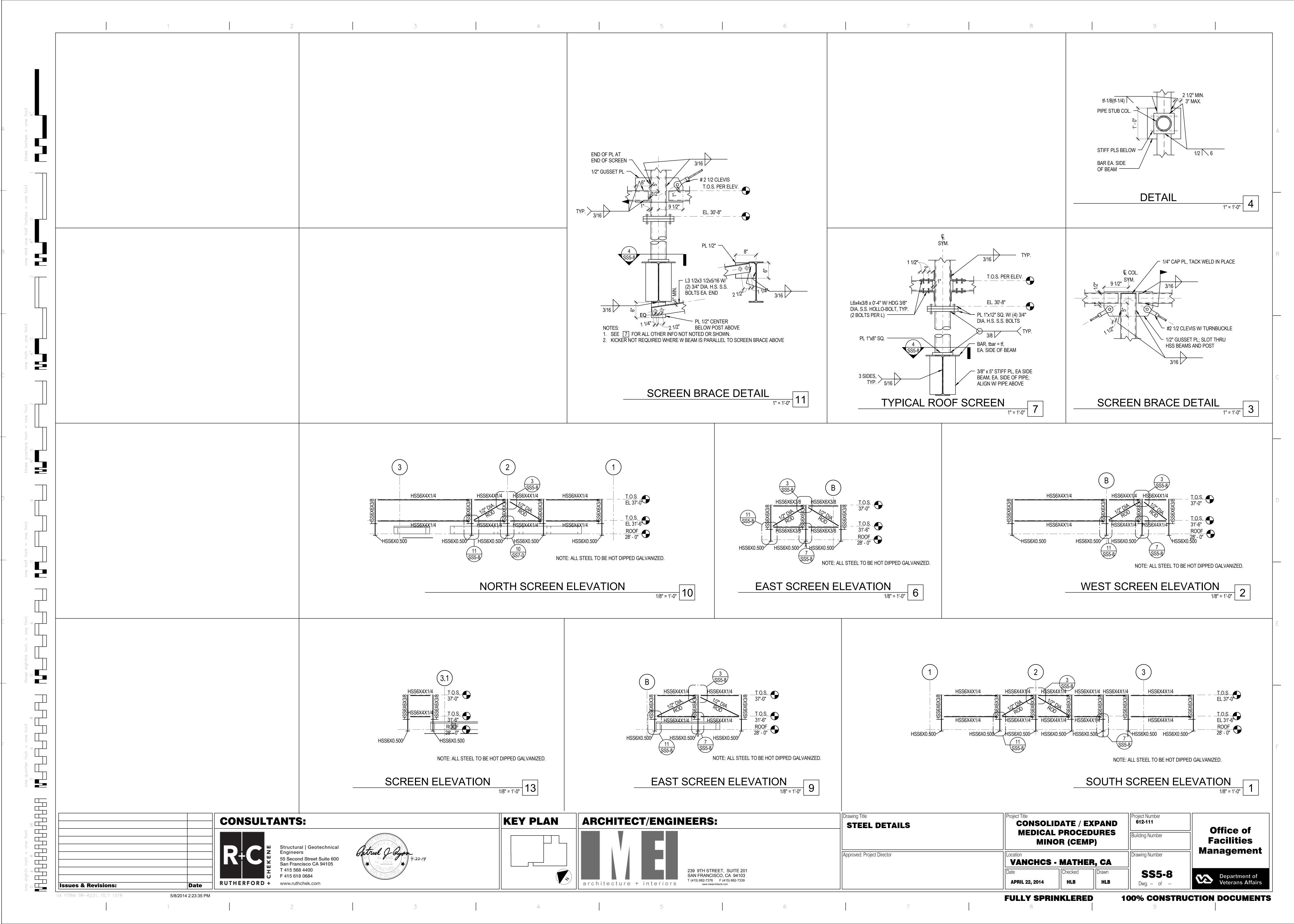
FULLY SPRINKLERED

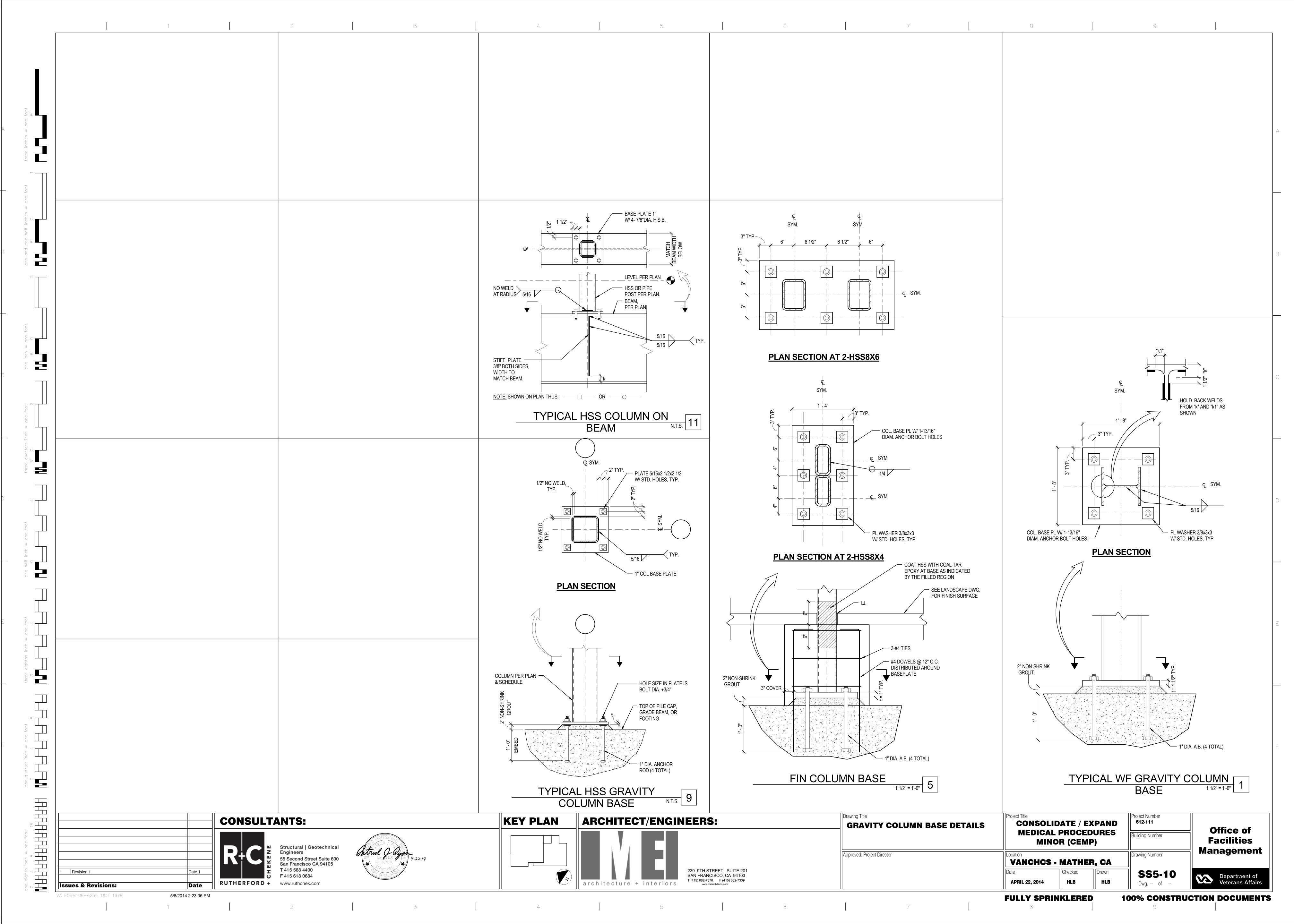
APRIL 22, 2014

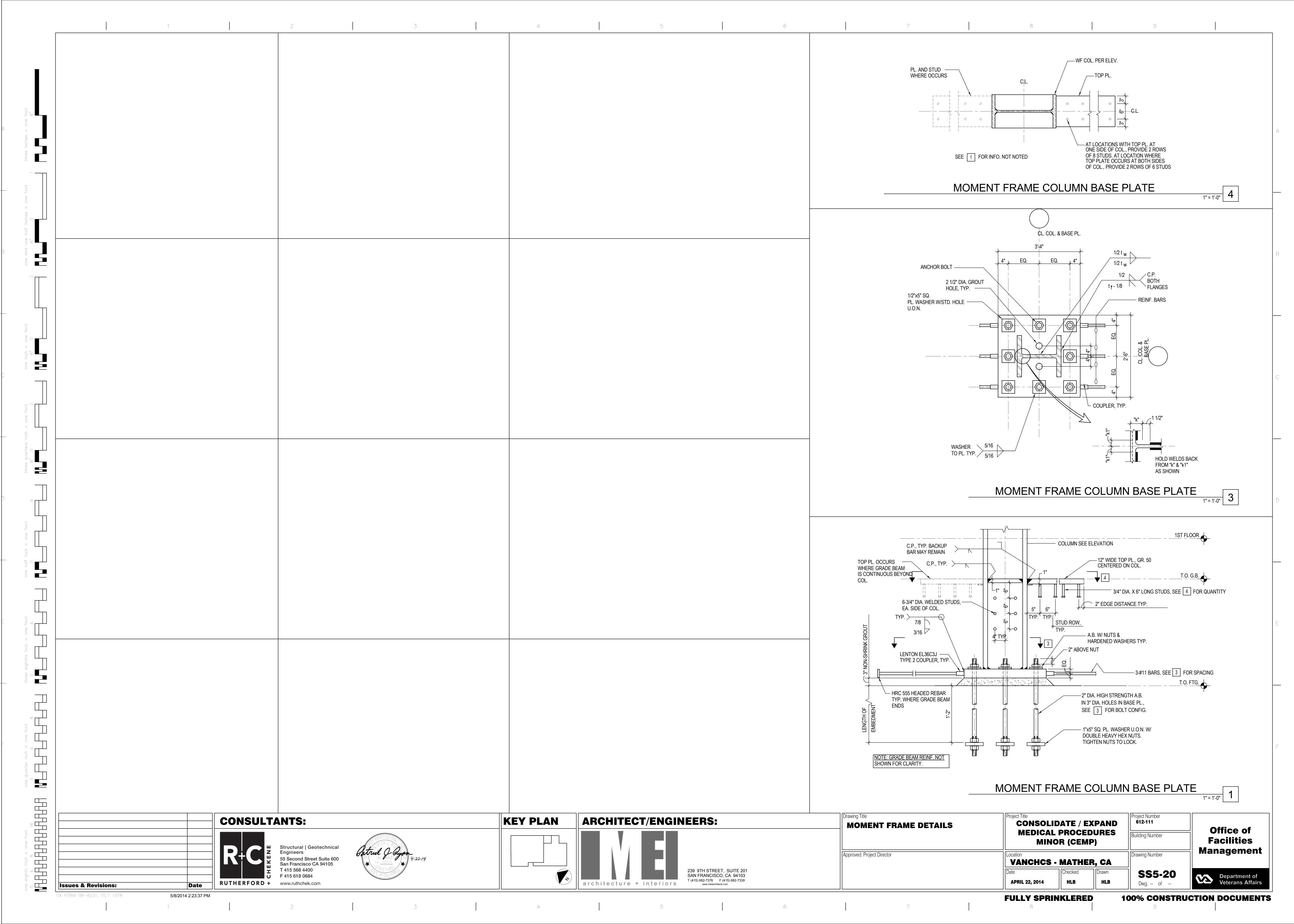


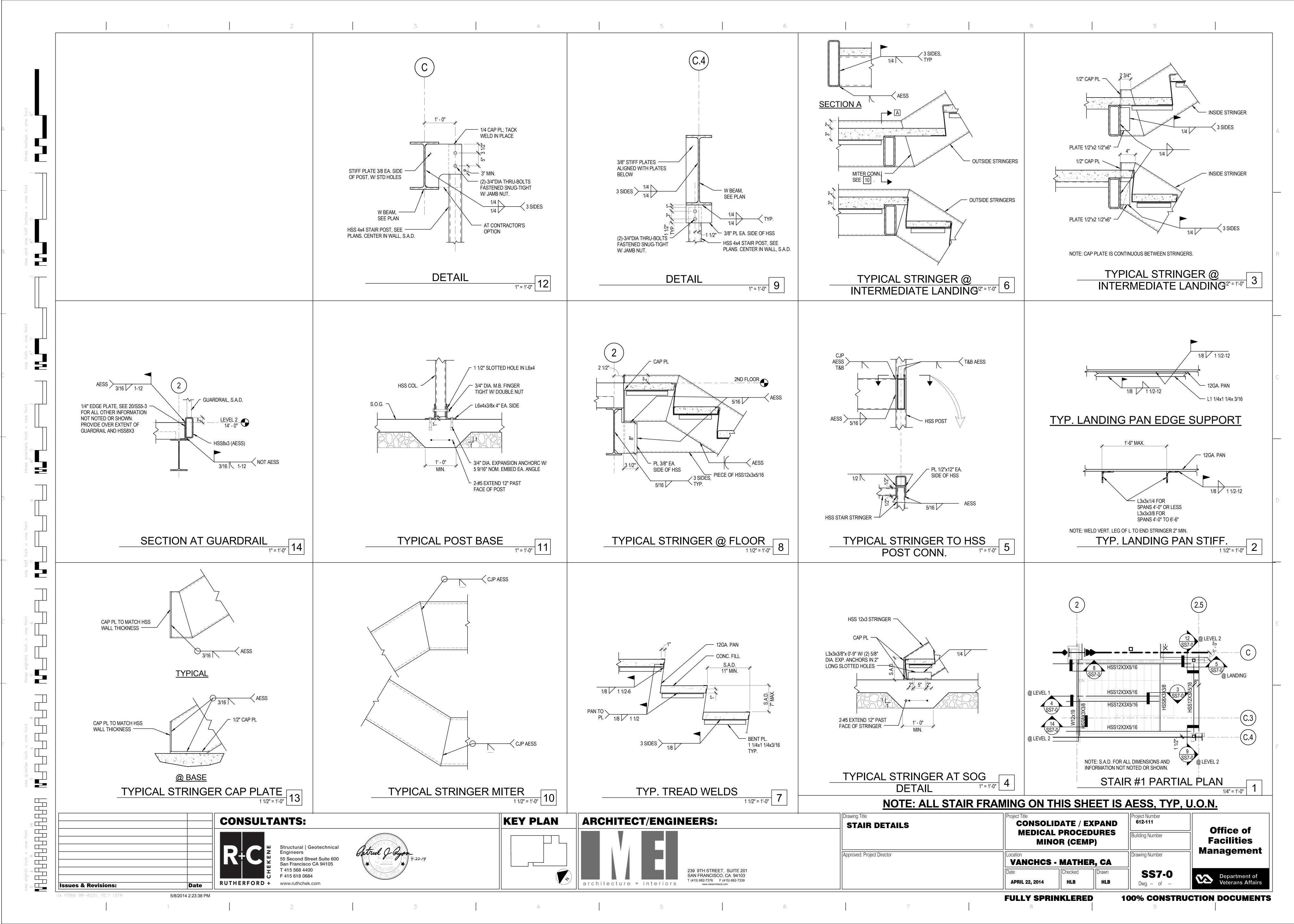


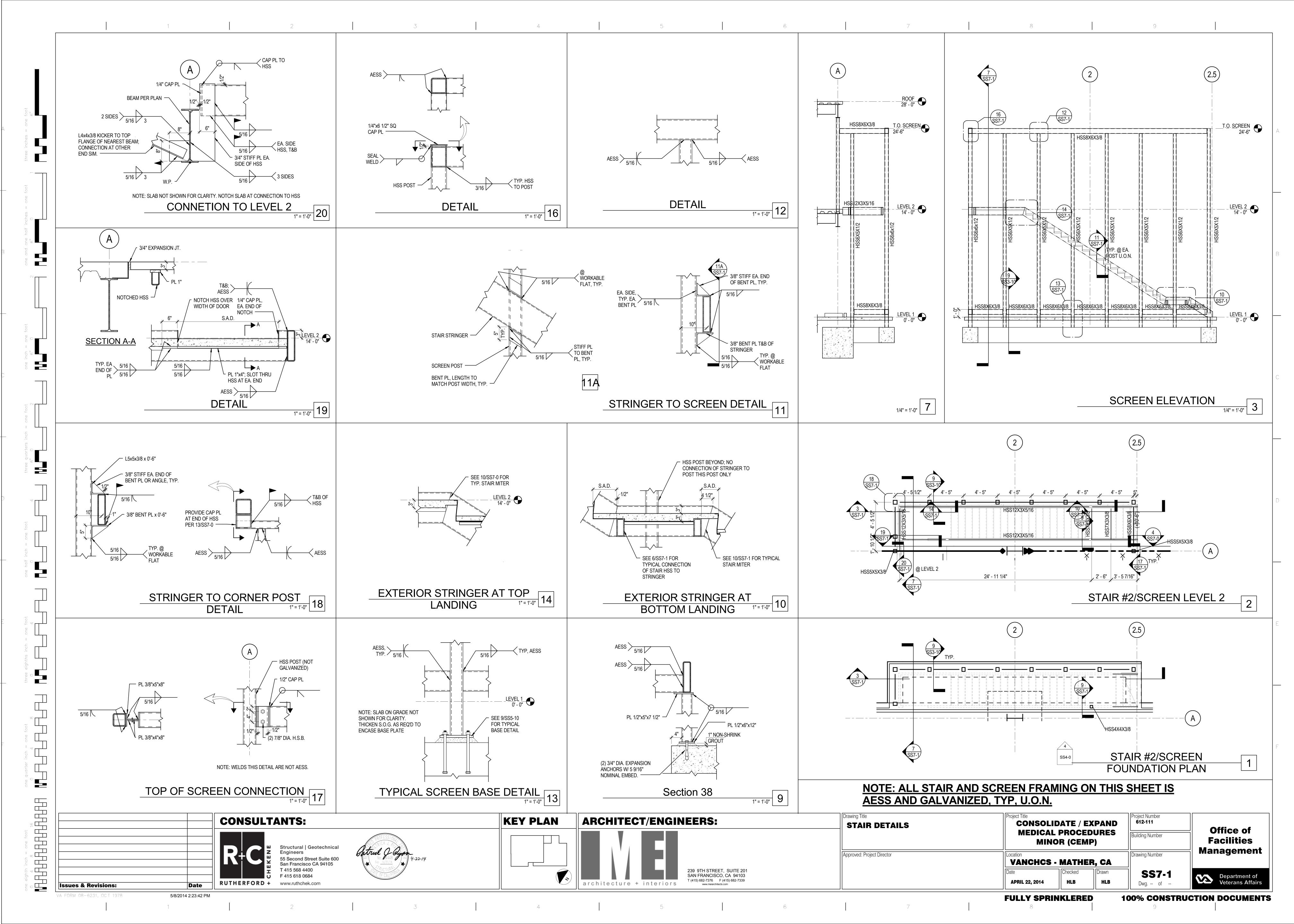


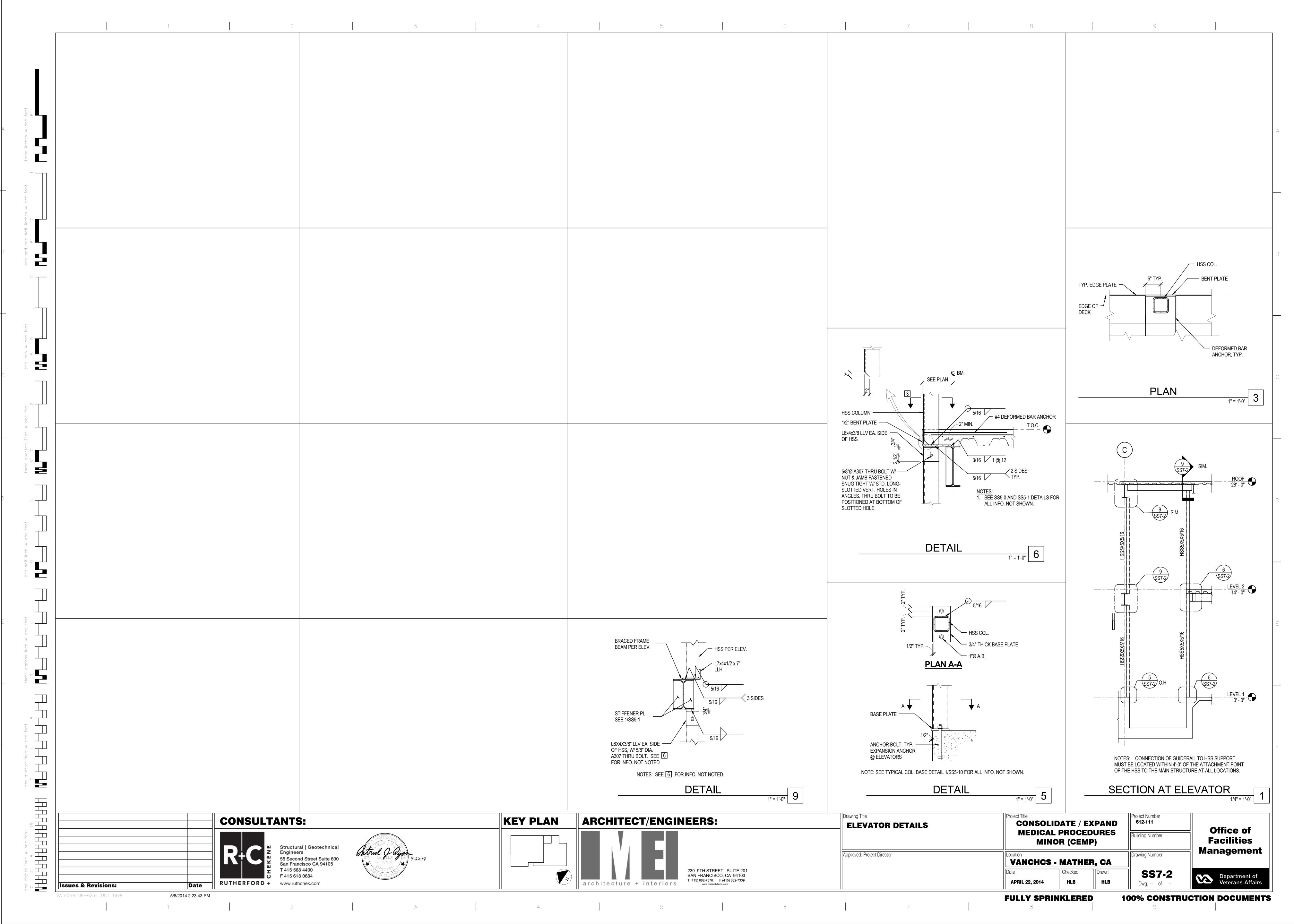


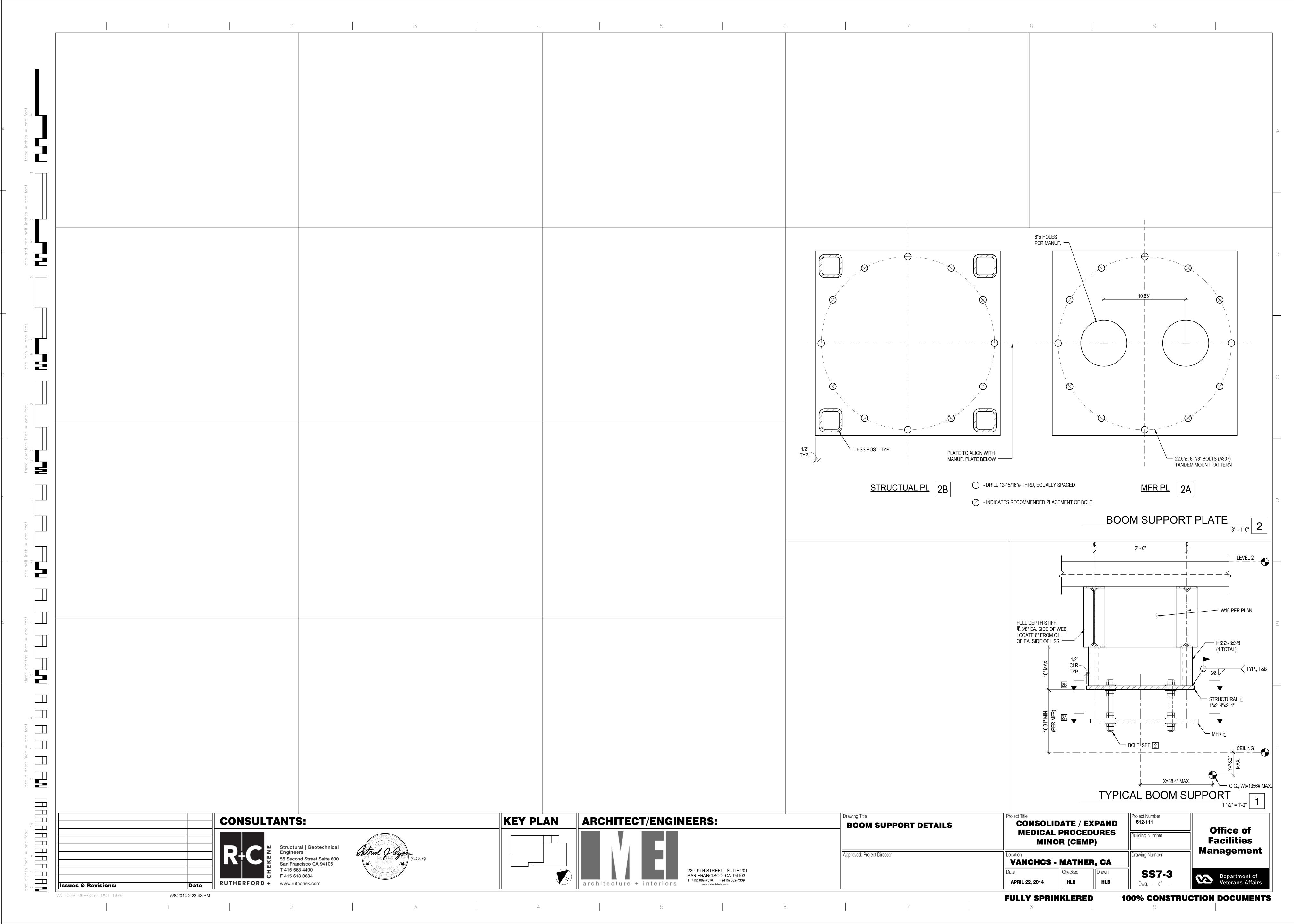












a. THE STEEL FABRICATOR'S BID PRICE FOR PROCUREMENT, FABRICATION AND ERECTION OF STRUCTURAL AND MISCELLANEOUS STEEL SHALL INCLUDE THE SIDEPLATE® LICENSE FEE FOR THE PROJECT. TO OBTAIN THE SIDEPLATE® LICENSE FEE, EACH PROSPECTIVE STEEL FABRICATOR WHO BIDS THE PROJECT SHALL CONTACT SIDEPLATE SYSTEMS, INC. BY ACCESSING THE SIDEPLATE WEBSITE (http://www.sideplate.com/fee) TO FORMALLY REQUEST THE SIDEPLATE® LICENSE FEE FOR THE PROJECT. IN THE UNLIKELY EVENT OF WEBSITE TECHNICAL DIFFICULTIES, PROSPECTIVE STEEL FABRICATORS MAY CONTACT SIDEPLATE SYSTEMS, INC. DIRECTLY VIA TELEPHONE TO REQUEST THAT THE SIDEPLATE® LICENSE FEE BE PROVIDED TO THEM VIA

b. UPON THE SUCCESSFUL STEEL FABRICATOR SIGNING A CONTRACT TO FABRICATE STRUCTURAL STEEL FOR THIS PROJECT, THE STEEL FABRICATOR SHALL SUBMIT A PURCHASE ORDER (PO) TO SIDEPLATE SYSTEMS, INC. FOR THE TOTAL AMOUNT OF THE SIDEPLATE® LICENSE FEE AND, SHALL INCLUDE SAID FEE IN ITS FIRST CONSTRUCTION DRAW. THE CONTENT OF THE PO SHALL INCLUDE THE LIST OF ITEMS PROVIDED BY SIDEPLATE SYSTEMS, INC. WHICH IS AVAILABLE FOR DOWNLOADING FROM http://www.sideplate.com/po. THE SIDEPLATE® LICENSE FEE SHALL BE PAID WITHIN 75 CALENDAR DAYS FROM THE DATE ON WHICH THE LATEST OF THESE TWO EVENTS OCCURS. WITHOUT LIMITATION OF REMEDIES, LATE PAYMENTS SHALL BEAR INTEREST AT THE RATE OF 10% PER ANNUM.

THE STEEL FABRICATOR SHALL MAKE PAYMENT OF THE SIDEPLATE® LICENSE FEE DIRECTLY TO:

SIDEPLATE SYSTEMS, INC. 25909 PALA, SUITE 200 MISSION VIEJO, CALIFORNIA 92691 TEL: 949-238-8900

1. THE GOVERNING CODES SHALL CONSIST OF ANSI/AWS D1.1-2008 (AWS D1.1), ANSI/AWS D1.8-2009 AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES (APRIL 14.2010). AND ALL APPLICABLE BUILDING AND JURISDICTIONAL CODES AND PROJECT STANDARDS SPECIFIED IN THE PROJECT SPECIFICATION STRUCTURAL STEEL SECTION. WHERE THE REQUIREMENTS DIFFER BETWEEN SIDEPLATE® CONNECTION NOTES, THE GENERAL STRUCTURAL NOTES AND THE GOVERNING CODES, THE MORE STRINGENT SECTION CRITERIA SHALL CONTROL.

2. ALPHA AND NUMERIC DESIGNATORS (#) & (#) USED HEREIN TO SIMPLIFY THE IDENTIFICATION OF PLATES, ANGLES AND WELDS, RESPECTIVELY, ARE DEFINED BELOW: {A} SIDE PLATE FOR UNIAXIAL CONNECTIONS, PARALLEL TO WEB OF COLUMN, CONNECTING BEAM TO COLUMN

{B} BEAM FLANGE COVER PLATE BRIDGING BETWEEN SIDE PLATES {A}

{C} VERTICAL SHEAR PLATE

{D} HORIZONTAL SHEAR PLATE - SEE POPPED OUT AND RECESSED OPTIONS ON SHEET

{F} VERTICAL SHEAR ELEMENT (WHICH CONSISTS OF PLATE {C} AND/OR ANGLE MATERIAL -SEE GRAPHIC NO. 9 FOR OPTIONS)

{1} FILLET WELD CONNECTING SIDE PLATE {A} TO HORIZONTAL SHEAR PLATE {D}

{2} FILLET WELD CONNECTING INSIDE FACE OF SIDE PLATE {A} TO COLUMN [DEMAND CRITICAL]

{5} FILLET WELD CONNECTING EDGE OF BEAM FLANGE TO COVER PLATE {B} [DEMAND CRITICAL]

{3} FILLET WELD CONNECTING HORIZONTAL SHEAR PLATE {D} TO FACES OF WEB AND FLANGES (WHERE APPLICABLE) OF COLUMN

{4} FILLET WELD TO CONSTRUCT VERTICAL SHEAR ELEMENT {F} AND TO CONNECT VERTICAL SHEAR ELEMENT {F} TO THE BEAM

{5a} FILLET WELD CONNECTING OUTSIDE SURFACE OF BEAM FLANGE TO COVER PLATE {B} 'U'-SHAPED SLOT [DEMAND CRITICAL]

(6) FILLET WELD CONNECTING VERTICAL SHEAR ELEMENT (F) TO VERTICAL EDGE OF SIDE PLATE (A) [DEMAND CRITICAL]

[7] FILLET WELD CONNECTING BEAM FLANGE COVER PLATE [8] AND/OR BEAM FLANGE TO SIDE PLATE [A]

1. IN ADDITION TO THE REQUIRED SUBMITTALS SPECIFIED BY THE BALANCE OF THE CONTRACT DOCUMENTS, THE FOLLOWING SUBMITTALS SHALL BE SENT TO SIDEPLATE SYSTEMS, INC. AT 25909 PALA, SUITE 200, MISSION VIEJO, CA 92691, PRIOR TO THE START OF THE ACTIVITIES CITED BELOW:

PRIOR TO THE START OF THIS ACTIVITY, THE FABRICATION SUBCONTRACTOR SHALL FORMALLY REQUEST THE FOLLOWING FROM SIDEPLATE SYSTEMS, INC.: THE NOTICE OF INTELLECTUAL PROPERTY (AutoCAD OR WORD FORMAT)

PRIOR TO THE START OF THIS ACTIVITY, THE CONTRACTOR SHALL SUBMIT TO SIDEPLATE SYSTEMS, INC VIA THE STRUCTURAL ENGINEER OF RECORD FOR ITS REVIEW AND DISPOSITION:

 DISTORTION CONTROL PROGRAM QUALITY CONTROL PROGRAM

WELDING PROCEDURE SPECIFICATIONS (WPS)

SUPPORTING PROCEDURE QUALIFICATION RECORDS (PQR)

 ONE ELECTRONIC COPY OF ALL STRUCTURAL STEEL SHOP DRAWINGS THAT EITHER DIRECTLY PERTAINS TO AND/OR AFFECTS THE FABRICATION OR ERECTION OF THE SIDEPLATE® STEEL FRAME CONNECTION SYSTEM, INCLUDING THE INITIAL SUBMITTAL AND ALL CORRECTED RE-SUBMITTALS OF AFFECTED SHOP DRAWINGS. SIDEPLATE SYSTEMS, INC. SHALL BE GIVEN, AS A MINIMUM, THE SAME SPECIFIED REVIEW TIME (NOT LESS THAN 7 BUSINESS DAYS) AS THE ENGINEER OF RECORD.

c. <u>FIELD ERECTION:</u> PRIOR TO THE START OF THIS ACTIVITY, THE CONTRACTOR SHALL SUBMIT TO SIDEPLATE SYSTEMS, INC VIA THE STRUCTURAL ENGINEER OF RECORD FOR ITS REVIEW AND DISPOSITION:

 DISTORTION CONTROL PLAN QUALITY CONTROL PLAN

 WELDING PROCEDURE SPECIFICATIONS (WPS) SUPPORTING PROCEDURE QUALIFICATION RECORDS (PQR)

ONE ELECTRONIC COPY OF ALL STRUCTURAL STEEL ERECTION DRAWINGS RELATED TO THE SIDEPLATE STEEL FRAME CONNECTION SYSTEM.

. PLATE AND ANGLE MATERIAL: a. ALL PLATE MATERIAL SHALL BE ASTM A572, GRADE 50.

ANGLE {E} MATERIAL SHALL BE ASTM A529, GRADE 50, OR ASTM A36 (fy=50KSI MIN.), OR EQUIVALENT, UNO. c. ALL PLATE MATERIAL 2 INCHES THICK AND GREATER SHALL MEET THE FOLLOWING ADDITIONAL REQUIREMENTS:

ASTM A435 TO PRECLUDE LAMELLAR DISCONTINUITIES A MINIMUM CVN TOUGHNESS OF 20 FT-LB. AT A TEMPERATURE OF 70°F IN ACCORDANCE WITH ASTM A6, SUPPLEMENTARY REQUIREMENT S5, AND THE PROVISIONS OF ASTM A673, FREQUENCY P-PIECE TESTING. d. THE ROLLED DIRECTION (I.E., DIRECTION OF GRAIN) OF SIDE PLATES (A) SHALL BE CLEARLY MARKED, USING ANY SUITABLE NON-DESTRUCTIVE MEANS, BY THE FABRICATION SUBCONTRACTOR ON EACH CUT PLATE TO INDICATE THE DIRECTION OF ROLL.

a. THE WELD FILLER METAL AND ASSOCIATED WELDING PROCESS FOR ALL FILLET WELDS SHALL MEET THE REQUIREMENTS OF AWS D1.1 AND D1.8, SECTION 6.3.2 AND SHALL BE ANY OF THE FOLLOWING, PROVIDED COMPLIANCE WITH NOTES 2.c AND 2.d BELOW IS DEMONSTRATED

 E70T-6, E71T-8 OR E70TG-K2 FOR FCAW E7XT-9 FOR FLUX CORED ARC WELDING (FCAW) WITH GAS SHIELDING

 F7A2-EXXX FOR SUBMERGED ARC WELDING (SAW) E7018 STICK ELECTRODE FOR SHIELDED METAL ARC WELDING (SMAW) b. THE WELD FILLER METAL USED FOR FILLET WELDS TO CONSTRUCT THE SIDEPLATE® CONNECTION SYSTEM PRESENTED HEREIN SHALL DEMONSTRATE AN ENERGY EQUIVALENT TO A MINIMUM CVN TOUGHNESS OF 20 FT-LBS. IMPACT STRENGTH AT A TEMPERATURE OF -20°F AND 40 FT-LBS. IMPACT STRENGTH AT 70°F AS DETERMINED BY AWS CLASSIFICATION TEST METHODS OR MANUFACTURER CERTIFICATION.

c. ALL WELD FILLER METAL SHALL SATISFY A MAXIMUM DIFFUSIBLE HYDROGEN CONTENT REQUIREMENT PER AWSAND D1.8 SECTION 6.3, OF 16 MILLILITERS OF HYDROGEN PER 100 GRAMS OF WELD METAL (H16) OR LESS d. REFER TO AWS D1.8 ANNEX B, FOR REQUIREMENTS WHEN MIXING FCAW-S WITH OTHER WELD PROCESSES.

HIGH STRENGTH BOLTS: a. BOLTS SHALL BE ASTM A325-N GRADE MATERIAL

ROLLED SHAPES AND WELDED BUILT-UP SHAPES: a. ALL ROLLED SHAPES USED FOR COLUMNS AND BEAMS IN CONSTRUCTING SIDEPLATE® MOMENT FRAMES SHALL BE ASTM A992 GRADE 50 UNO.

FOR EACH DIFFERENT SIZE OF STEEL FRAME COLUMNS AND BEAMS IDENTIFIED IN THE CONTRACT DOCUMENTS INVOLVING ASTM A6 HOT-ROLLED SHAPES WITH FLANGES 1 1/2 INCHES THICK OR THICKER, AND/OR PLATE 2 INCHES THICK OR THICKER USED TO CONSTRUCT WELDED BUILT-UP SECTIONS, CHARPY V-NOTCH (CVN) TOUGHNESS TESTING SHALL BE CONDUCTED IN ACCORDANCE WITH THE PROVISIONS OF ASTM A673, AS •• FREQUENCY H - HEAT TESTING FOR CITED ASTM A6 GROUP SHAPES AND/OR THRESHOLD OF FLANGE THICKNESS.

•• FREQUENCY P - PIECE TESTING FOR CITED THRESHOLD OF PLATE THICKNESS. A MINIMUM CVN TOUGHNESS OF 20 FT-LB AT A TEMPERATURE OF 70° F, IN ACCORDANCE WITH ASTM A6, SUPPLEMENTARY REQUIREMENT S30, SHALL

BE DOCUMENTED IN THE (CERTIFIED MILL TEST REPORT) CMTR. •• IF THE CMTR DOES NOT DOCUMENT THE MINIMUM CVN VALUES, A COUPON SHALL BE REMOVED FROM THE END OF EACH MEMBER SHAPE SAMPLED AND/OR FROM THE END OF EACH PIECE OF PLATE TO BE TESTED. THE LENGTH OF COUPON SHALL BE ORIENTED PARALLEL TO THE LONGITUDINAL AXIS OF THE MEMBER. THE TEST SPECIMEN SHALL BE MACHINED FROM EACH COUPON, EXCEPT THE LONGITUDINAL AXIS OF THE TEST SPECIMEN FOR HEAVY ROLLED SHAPES SHALL BE LOCATED AS NEAR AS PRACTICABLE TO A POINT MIDWAY BETWEEN THE INNER FLANGE SURFACE AND THE CENTER OF FLANGE THICKNESS, AT THE INTERSECTION OF THE WEB MID-THICKNESS, IN ACCORDANCE WITH THE AISC SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS, SECTION A3-1C, HEAVY SHAPES.

PREPARATION

8 4 8

Issues & Revisions:

VA FORM 08-6231, OCT 1978

THE CONTRACTOR'S FABRICATION AND ERECTION SUBCONTRACTOR SHALL EMPLOY A DISTORTION CONTROL PROGRAM AND SHALL SUBMIT IT TO SIDEPLATE SYSTEMS INC. FOR ITS REVIEW AND DISPOSITION PRIOR TO THE START OF SIDEPLATE® MOMENT FRAME FABRICATION. THE DISTORTION CONTROL PROGRAM SHALL BE IN ACCORDANCE WITH THE PROVISIONS OF AWS D1.1 SECTION 5.21 AND 5.22 TO ENSURE THAT THE FOLLOWING ARE MAINTAINED: DIMENSIONAL ACCURACY

 FRAMING AND ALIGNMENT TOLERANCES • COMPLIANCE WITH AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES, SECTION 7.0, ERECTION PROVISIONS CONTROL OF DISTORTION AND WELD SHRINKAGE

2. BASE METAL SURFACE PREPARATION: SURFACES ON WHICH WELD METAL IS TO BE DEPOSITED, INCLUDING BUT NOT LIMITED TO COLUMN FLANGE TIPS (I.E., COLUMN FLANGE-TO-SIDE PLATE (A) ATTACHMENT), BEAM FLANGE TIPS (I.E., BEAM FLANGE-TO-COVER PLATE (B) ATTACHMENT), AND THERMAL CUT EDGES (E.G., LONGITUDINAL EDGES OF COVER PLATE (B), SHALL BE SMOOTH, UNIFORM, AND FREE FROM LOOSE OR THICK SCALE, SLAG, RUST, MOISTURE, GREASE AND OTHER FOREIGN MATERIAL THAT WOULD PREVENT PROPER WELDING. 3. THERMAL CUTTING:

a. THE ROUGHNESS OF ALL THERMAL-CUT SURFACES SHALL BE NO GREATER THAN AN ANSI SURFACE ROUGHNESS VALUE OF 1000 MICRO-INCHES. ROUGHNESS EXCEEDING THIS VALUE, AND NOTCHES OR GOUGES NOT MORE THAN 3/16 INCH DEEP, ON OTHERWISE SATISFACTORY

SURFACES SHALL BE REMOVED BY MACHINING OR GRINDING. FLAME CUT SURFACES SHALL BE FREE OF GLOBULES AND LOOSE SLAG. THE THERMAL CUTTING EQUIPMENT SHALL BE ADJUSTED AND

MANIPULATED SO AS TO AVOID CUTTING BEYOND (INSIDE) THE PRESCRIBED LINES. THERMAL CUTTING PROCESSES SHALL BE LIMITED TO PLASMA ARC-CUTTING OR OXYFUEL GAS PROCESSES.

4. WEB/FLANGE FILLET AREA (K-LINE): a. UNLESS NOTED OTHERWISE, VERTICAL SHEAR PLATES (C) AND HORIZONTAL SHEAR PLATES (D) SHALL HAVE THEIR INSIDE CORNERS CLIPPED PER AWS D1.8 CLAUSE 4 TO PREVENT WELDING IN THE K-AREA BETWEEN WEB AND FLANGE. THE DIMENSIONS OF THE CLIPPED CORNER SHALL BE DETAILED ON THE SHOP DRAWINGS AND SHALL BE SUCH THAT THE WELD FROM THE PLATE TO THE WEB STARTS AND STOPS A DISTANCE OF 11/2" FROM THE TANGENT OF THE

FLANGE TO WEB FILLET (I.E., THE AISC 'K' DIMENSION). WELD {3} RETURNS ON THE INSIDE FACE OF THE COLUMN FLANGES (AS OCCURS): IN NO CASE SHALL A WELD TIE-IN OF WELD {3} BE ALLOWED ACROSS THE CLIPPED CORNER OF THE HORIZONTAL SHEAR PLATES (D), AT THE K-LINE BETWEEN WEB AND FLANGE. WHERE WELDING OF HORIZONTAL SHEAR PLATE (D) OR VERTICAL SHEAR PLATE (C) ENCROACH INTO THE K-AREA (AS DEFINED IN AISC 341-10), THE WEB SHALL BE TESTED FOR CRACKS USING MAGNETIC PARTICLE TESTING (MT). THE MT INSPECTION AREA SHALL INCLUDE THE ACCESSIBLE K-AREA BASE

1. WELDER QUALIFICATION: THE PERFORMANCE OF ALL WELDERS, WELDING OPERATORS AND TACK WELDERS SHALL BE QUALIFIED IN CONFORMANCE WITH AWS D1.1, SECTION 4, PART C TO DEMONSTRATE ABILITY TO PRODUCE SOUND WELDS.

a. THE CONTRACTOR SHALL PREPARE A SPECIFIC WRITTEN WPS FOR EVERY DIFFERENT WELDING APPLICATION DIFFERENT WELDING APPLICATIONS INCLUDE, BUT ARE NOT LIMITED TO, THE JOINT DETAILS AND TOLERANCES, PREHEAT AND INTERPASS TEMPERATURE, SINGLE OR MULTIPLE STRINGER PASSES, WELDING CURRENT, POLARITY, ALLOWABLE AMPERAGE RANGES, ALLOWABLE VOLTAGE RANGES, ALLOWABLE TRAVEL SPEED RANGES, ELECTRODE EXTENSION, ROOT TREATMENT, WELDING POSITION, WELDING PROCESS, ELECTRODE MANUFACTURER, FILLER METAL TRADE NAME FOR THE ELECTRODE TYPE SELECTED, AND OTHER ESSENTIAL VARIABLES AS DEFINED IN AWS D1.1 REQUIRED TO COMPLETE THE FABRICATION AND ERECTION OF THE SPECIFIED SIDEPLATE® CONNECTIONS. AMPERAGE, VOLTAGE, TRAVEL SPEED AND ELECTRODE EXTENSION SHALL BE WITHIN THE FILLER METAL MANUFACTURER'S

b. EACH WPS PREPARED SHALL BE BASED ON AND REFERENCED TO A DOCUMENTED PROCEDURE QUALIFICATION RECORD (PQR). PREVIOUS WPS QUALIFICATION PERFORMED BY THE CONTRACTOR'S FABRICATION/ERECTION SUBCONTRACTOR THAT COMPLIES WITH THE PROVISIONS HEREIN MAY SATISFY THIS REQUIREMENT. EACH WPS AND SUPPORTING PQR SHALL BE SUBMITTED TO THE ENGINEER OF RECORD, AND TO SIDEPLATE SYSTEMS, INC. FOR REVIEW AND

c. THE APPROVED WPS FOR EACH APPLICABLE PRODUCTION WELD, FOR THE WORK TO BE PERFORMED, SHALL BE CLEARLY DISPLAYED TO PROVIDE READY ACCESS BY THE ASSIGNED WELDERS, WELDING SUPERVISORS AND INSPECTORS. d. EACH WPS SHALL BE PREPARED BY A QUALIFIED INDIVIDUAL WHO IS RESPONSIBLE FOR THE SUITABILITY OF THE WPS.

VISUAL INSPECTION IN ACCORDANCE WITH AWS D1.1, SECTION 4.8.1.

ENVELOPE TESTING OF FILLER METALS AS REQUIRED BY AWS D1.8.

3. WELDING PROCEDURE QUALIFICATION RECORDS (PQR): a. DOCUMENTED PROCEDURE QUALIFICATION RECORDS SHALL BE MAINTAINED BY THE CONTRACTOR'S FABRICATION/ERECTION SUBCONTRACTOR. PROCEDURE QUALIFICATION SHALL CONFORM TO THE REQUIREMENTS OF AWS D1.1, TABLE 4.1 AND EMPLOY THE FOLLOWING TESTING METHODS AND ACCEPTANCE CRITERIA:

 ULTRASONIC TESTING (UT) BEFORE PREPARING MECHANICAL TEST SPECIMENS, IN ACCORDANCE WITH AWS D1.1, SECTION 4.8.2. MECHANICAL TESTING IN ACCORDANCE WITH AWS D1.1, SECTION 4.8.3. THE TYPE AND NUMBER OF TEST SPECIMENS, FOR EACH QUALIFIED PRODUCTION WELDING POSITION, SHALL BE PER AWS D1.1, TABLE 4.2 (1), USING A GROOVE WELD TEST PLATE PER FIGURE 4.10(2). ALTERNATELY, FOR FILLET WELDS ONLY, QUALIFICATION BY MECHANICAL TESTING MAY BE SATISFIED BY A CONSUMABLES VERIFICATION TEST IN ACCORDANCE WITH AWS D1.1, SECTION 4.11.3 USING A GROOVE WELD TEST PLATE PER FIGURE 4.23, WELDED IN THE FLAT POSITION; FOLLOWED BY MACROTECH TEST IN ACCORDANCE WITH AWS D1.1, SECTION 4.11.2, USING A FILLET WELDED T-JOINT TEST PLATE PER FIGURE 4.19 FOR EACH

QUALIFIED PRODUCTION WELDING POSITION. THE TYPE AND NUMBER OF TEST SPECIMENS, FOR EACH QUALIFIED PRODUCTION WELDING POSITION, SHALL BE PER AWS D1.1. TABLE 4.4. CHARPY V-NOTCH IMPACT TESTING OF THE WELD METAL IN ACCORDANCE WITH AWS D1.1, SECTION 4.1.1.3. THE REQUIRED TEST TEMPERATURE AND ENERGY VALUE SHALL BE THAT SPECIFIED IN MATERIAL SECTION 2.C. THE TYPE AND NUMBER OF NOTCH TOUGHNESS SPECIMENS, FOR EACH QUALIFIED PRODUCTION WELDING POSITION, SHALL BE PER AWS D1.1, ANNEX III, TABLE III-1. ONE SPECIMEN MAY BE LESS THAN THE MINIMUM AVERAGE OF 20 FT-LBS., BUT NOT LESS THAN 15 FT-LBS.

b. ALL PROCEDURE QUALIFICATION TESTING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE PERFORMED BY AN INDEPENDENT TESTING LABORATORY CERTIFIED BY THE APPLICABLE GOVERNMENTAL BODY AND APPROVED BY THE AUTHORITY HAVING JURISDICTION. c. IN LIEU OF THE REQUIREMENTS OF 3.a AND 3.b, A CURRENT CERTIFICATE OF CONFORMANCE PROVIDED BY THE WIRE MANUFACTURE MAY BE USED AS THE SUPPORTING PQR PROVIDED FULL COMPLIANCE WITH EVERY SINGLE CONDITION OF PREQUALIFICATION FOUND IN AWS D1.1 SECTION 3 ,AND AWS D1.8 HIGH AND LOW HEAT INPUT. FOR PREQUALIFIED FILLET AND CJP WELDS. THE SELECTION OF THIS OPTION BY THE CONTRACTOR'S FABRICATION/ERECTION SUBCONTRACTOR IS PREDICATED ON ITS ACKNOWLEDGEMENT THAT ITS CERTIFIED WELDERS ARE EXPERIENCED AND CONFIDENT IN THE USE AND SETTINGS SPECIFIED IN THE CERTIFICATE OF CONFORMANCE WITH THE ALLOWABLE TOLERANCES FOR ESSENTIAL VARIABLES FOUND IN TABLE 4.5 OF AWSD1.1COMBINATIONS OF WELDING VARIABLES SHALL PRODUCE HEAT INPUTS WITHIN THE RANGE QUALIFIED BY THE ELECTRODE MANUFACTURER'S HEAT INPUT

a. TACK WELDS SHALL BE PLACED WHERE THEY WILL BE INCORPORATED INTO A FINAL WELD AND SHALL BE SUBJECT TO THE SAME QUALITY REQUIREMENTS AS THE FINAL WELDS, INCLUDING POSITION, PREHEAT AND UNDERCUT, IN ACCORDANCE WITH AWS D1.1, SECTION 5.18.2 AND AWS D1.8, SECTION 6.16. THESE

QUALITY REQUIREMENTS SHALL APPLY EQUALLY TO TACK WELDING OF ANY OTHER CONSTRUCTION AIDS b. TACK WELDS BETWEEN SIDE PLATE (A), AND FLANGE EDGES OF COLUMN SHALL NOT BE PLACED WITHIN 3 INCHES OF EACH END OF WELD (2), AND THEY SHALL NOT BE PERMITTED ACROSS THE COLUMN'S FLANGE THICKNESS.

c. TACK WELDS BETWEEN SIDE PLATES {A}, AND COVER PLATES {B}, AND TACK WELDS BETWEEN BEAM FLANGE TIPS AND COVER PLATES {B}, SHALL NOT BE PLACED WITHIN 3 INCHES OF EACH END OF WELD {7} OR WELD {5}, RESPECTIVELY. d. ALIGNMENT CONTROL METHODS TO MAINTAIN THE NECESSARY SEPARATION DISTANCE REQUIRED TO INSTALL BEAM ASSEMBLY INCLUDE, BUT ARE NOT LIMITED TO, TACK WELDING OF TEMPORARY ANGLE STRUTS ('DOGS') TO TOP AND BOTTOM FREE EDGES OF SIDE PLATE {A}.

WELD RUN-OFF TABS SHALL NOT BE USED FOR FILLET WELDS. 6. PREHEAT AND INTERPASS TEMPERATURE REQUIREMENTS a. THE MINIMUM PREHEAT AND INTERPASS TEMPERATURES FOR A GIVEN THICKNESS OF BASE METAL TO BE WELDED SHALL BE IN ACCORDANCE WITH AWS D1.1 TABLE b. IN NO CASE, REGARDLESS OF THE WELDING PROCESS, SHALL THE PREHEAT TEMPERATURE BE LESS THAN THAT REQUIRED TO DRIVE OFF ANY SURFACE

MOISTURE OR CONDENSATION WHICH MAY BE PRESENT ON THE STEEL ELEMENTS TO BE WELDED. c. PREHEAT TEMPERATURES SHALL BE MEASURED AT A DISTANCE FROM THE WELD EQUAL TO THE THICKNESS OF THE PART BEING WELDED, BUT NOT LESS THAN THREE INCHES IN ANY DIRECTION INCLUDING THE THROUGH THICKNESS OF THE PIECE. WHERE PLATES ARE OF DIFFERENT THICKNESS, THE PREHEAT REQUIREMENT FOR THE THICKER PLATE SHALL GOVERN. MAINTENANCE OF PREHEAT TEMPERATURE THROUGH THE EXECUTION OF THE WELD (I.E. THE INTERPASS TEMPERATURE) IS ESSENTIAL. MAXIMUM INTERPASS TEMPERATURE SHALL NOT EXCEED 550 DEGREES FAHRENHEIT, MEASURED AT A DISTANCE NOT EXCEEDING THREE INCHES FROM THE START OF THE WELD PASS. WELDING OPERATORS AND INSPECTORS SHALL BE IN POSSESSION OF AND UTILIZING TEMPERATURE MEASURING DEVICES.

7. ALL SLAG SHALL BE REMOVED AFTER EACH WELD PASS AND THE WELD AND THE ADJACENT BASE METAL SHALL BE CLEANED BEFORE WELDING OVER PREVIOUSLY DEPOSITED WELD METAL. THIS REQUIREMENT SHALL APPLY NOT ONLY TO SUCCESSIVE LAYERS BUT ALSO TO SUCCESSIVE BEADS AND TO THE CRATER AREA WHEN

WELDING IS RESUMED AFTER ANY INTERRUPTION, IN ACCORDANCE WITH AWS D1.1 SECTION 5.30.1 8. ARC STRIKES WITHIN THE SIDEPLATE PROTECTED ZONE ON BOTH THE INTERIOR AND EXTERIOR FACES OF SIDE PLATES (A), WITHIN THE TOP AND BOTTOM 6 INCHES OF PLATE HEIGHT SHALL BE AVOIDED. IF THEY DO OCCUR, THEY SHALL BE REMOVED BY GRINDING AND SHALL HAVE BASE METAL REPAIRED AND NON-DESTRUCTIVE

9. WELD END TERMINATIONS FOR RECESSED PLATE {D} OPTION ONLY (AS OCCURS FOR THE WELD {3} ONLY ON THE COLUMN WEB AND FLANGES):

a. IN ORDER TO PREVENT TIE-IN BETWEEN THE ENDS OF WELD {3}, CLOSEST TO THE INSIDE FACE OF SIDE PLATE {A}, AND WELD {1}, THE ENDS OF WELD {1} SHALL BE HELD BACK FROM THE FLANGE TIP OF COLUMN BY A DISTANCE EQUAL TO WELD {3} PLUS 1/8". IN NO CASE SHALL A WELD TIE-IN BETWEEN THE ENDS OF WELD {1} AND THE ENDS OF WELD {3} CLOSEST TO THE INSIDE FACE OF SIDE PLATE {A} BE ALLOWED. FABRICATION PRIORITY IS GIVEN HEREIN TO WELDING FILLET WELD {3} ALONG ITS FULL DISTANCE. 10. PEENING SHALL NOT BE ALLOWED.

1. ASTM A325-N BOLTS ARE PERMITTED TO BE INSTALLED TO SNUG-TIGHT CONDITION. THE SNUG-TIGHT CONDITION IS DEFINED AS THE TIGHTNESS ATTAINED BY EITHER A FEW IMPACTS OF AN IMPACT WRENCH OR THE FULL EFFORT OF A WORKER WITH AN ORDINARY SPUD WRENCH THAT BRINGS THE CONNECTED PLIES INTO FIRM CONTACT.

QUALITY CONTROL

1. THE CONTRACTOR'S FABRICATION/ERECTION SUBCONTRACTOR SHALL BE RESPONSIBLE FOR QUALITY CONTROL BY PROVIDING. AS A MINIMUM, IN-PROCESS VISUAL INSPECTION OF ALL FABRICATION AND ERECTION ACTIVITIES TO ENSURE THAT MATERIALS AND WORKMANSHIP MEET THE REQUIREMENTS OF THE CONTRACT DOCUMENTS, AND SHALL INCLUDE WORK PERFORMED PRIOR TO ASSEMBLY. SUCH WORK SHALL INCLUDE, BUT NOT BE LIMITED TO, VERIFYING THAT EFFECTIVE PROCEDURES AND METHODS HAVE BEEN EMPLOYED IN THE FORM OF AN EFFECTIVE DISTORTION CONTROL PROGRAM TO ACCOUNT FOR AND COUNTERACT THE EFFECTS OF WELD SHRINKAGE. EXISTING BEAM SWEEP AND CAMBER, AND CHANGES IN MOMENT FRAME GEOMETRY DUE TO SKEWED AND CURVED DESIGN CONFIGURATIONS (AS OCCURS), TO ENSURE COMPLIANCE WITH SPECIFIED ERECTION AND ALIGNMENT TOLERANCES. QC INSPECTION SHALL INCLUDE HOLD POINTS FOR THE FOLLOWING: **FULL-LENGTH BEAM APPLICATIONS:** a. <u>COLUMN TREE ASSEMBLY</u>

VERIFICATION THAT ACTUAL COLUMN FLANGE WIDTH IS AT LEAST NOMINAL COLUMN FLANGE WIDTH WHERE THE SIDE PLATES (A) ARE TO BE INSTALLED IN THE UNLIKELY EVENT ACTUAL COLUMN FLANGE WIDTH IS LESS THAN NOMINAL, BUT WITHIN AISC STANDARD MILL TOLERANCES (-3/16" MAX), CONTACT SIDEPLATE SYSTEMS, INC FOR APPROPRIATE RECOMMENDATIONS. ii QC INSPECTION SHALL PROVIDE A HOLD POINT AFTER PLACEMENT OF WELD {2}, COOLING OF WELD {2} AND REMOVAL OF BOTTOM 'DOG' TO VERIFY MINIMUM DIMENSION 'Z' ANYWHERE IN BETWEEN THE SIDE PLATES FROM TOP TO BOTTOM, AND TO ASCERTAIN IF REQUIRED RATTLE SPACE WILL BE

PROVIDED BASED ON THE DETAILED WIDTH OF TOP COVER PLATE (B) (SEE GRAPHIC NO. 5). iii VERIFICATION THAT THE CENTER OF BOTTOM BOLT HOLE IN EACH SIDE PLATE (A) IS 6 INCHES ABOVE THE BOTTOM EDGE OF SIDE PLATE (A). b. <u>FULL-LENGTH BEAM ASSEMBLY</u>

VERIFICATION OF PERPENDICULAR ALIGNMENT BETWEEN TOP FACE OF BOTTOM COVER PLATE (B) AND WEB OF FULL-LENGTH BEAM, TO MINIMIZE, IF NOT ELIMINATE, ANY POTENTIAL ROOT GAP BETWEEN BOTTOM EDGE OF EACH SIDE PLATE {A}, AND TOP FACE OF THE BOTTOM COVER PLATE {B} WHEN THE FULL LENGTH BEAM HAS BEEN LIFTED INTO PLACE. ii VERIFICATION THAT THE CENTER OF BOTTOM ERECTION BOLT HOLE IS 6 INCHES ABOVE THE TOP FACE OF THE BOTTOM COVER PLATE {B}. CONSIDERATION SHALL BE GIVEN TO THE CUPPING UPWARD OF THE BOTTOM COVER PLATE {B}. VERIFICATION THAT THE ENTIRE EXTERIOR FACE OF THE OUTSTANDING LEĠ ÓF VERTICAL SHEAR ELEMENT IS PARALLEL TO THE WEB OF THE FULL-LENGTH iii BEAM. IN NO CASE SHALL THE OUTSIDE FACE OF THE VERTICAL SHEAR ELEMENT EXTEND BEYOND THE EDGE OF TOP COVER PLATE {B}.

2. EXPOSURE LIMITATIONS ON FCAW ELECTRODES: a. AFTER REMOVAL FROM PROTECTIVE PACKAGING, THE PERMISSIBLE ATMOSPHERIC EXPOSURE TIME OF FCAW ELECTRODES SHALL NOT EXCEED THE ELECTRODE MANUFACTURER'S GUIDELINES AND SHALL BE IN ACCORDANCE WITH AWS D1.8 SECTION 6.4.

a. THE PARTS TO BE JOINED BY FILLET WELDS SHALL BE BROUGHT INTO AS CLOSE CONTACT AS PRACTICABLE, USING AS NECESSARY SUITABLE CLAMPING MEANS. THE ROOT OPENING (I.E., THE FIT-UP GAP) SHALL NOT EXCEED 1/4 INCH. FOR FILLET WELD ROOT GAPS GREATER THAN 1/16 INCH, THE LEG SIZE (I.E., THE SPECIFIED SIZE) OF FILLET WELD SHALL BE INCREASED BY THE AMOUNT OF THE ROOT OPENING.

QUALITY ASSURANCE

1. IN ADDITION TO ALL OTHER QUALITY ASSURANCE INSPECTION ACTIVITIES, THE OWNER'S VERIFICATION INSPECTOR SHALL BE RESPONSIBLE FOR: a. MAGNETIC PARTICLE TESTING (MT) SHALL BE PROVIDED IN ACCORDANCE WITH AWS D1.1, ASTM E709 AND ASTM E1444 FOR PROCEDURE AND TECHNIQUE FOR FILLET WELDS {7}. INSPECT THE BEGINNING AND END OF THESE WELDS FOR A 6 INCH LENGTH, PLUS ANY LOCATION ALONG THE LENGTH OF THE WELD WHERE A START AND RESTART IS VISUALLY NOTED FOR A DISTANCE OF 6 INCHES ON EITHER SIDE OF THE STOP/START LOCATION. THE STANDARDS OF ACCEPTANCE SHALL BE IN ACCORDANCE WITH AWS D1.1. ASTM E709 AND ASTM E1444.

b. EACH WPS AND SUPPORTING PQR SHALL BE SUBMITTED TO THE ENGINEER OF RECORD, AND TO SIDEPLATE SYSTEMS, INC. FOR REVIEW AND APPROVAL PRIOR TO THE START OF FABRICATION c. TO ASSURE THE PROPER AMPERAGE AND VOLTAGE OF THE WELDING PROCESS, THE USE OF HAND HELD CALIBRATED AMP AND VOLT METERS SHALL BE USED. THIS EQUIPMENT SHALL BE USED BY THE FABRICATOR, ERECTOR, AND THE INSPECTOR. AMPERAGE AND VOLTAGE SHALL BE MEASURED NEAR THE

ARC. TRAVEL SPEED AND ELECTRODE STICK OUT SHALL BE VERIFIED TO BE IN COMPLIANCE WITH THE APPROVED WPS. d. VISUAL INSPECTION SHALL BE PERFORMED ON ALL SHOP AND FIELD WELDS.

e. EACH WELDER EMPLOYED ON THE PROJECT SHALL UNDERSTAND ALL THE REQUIREMENTS OF THE WELDING PROCEDURE SPECIFICATION (S) BEFORE WELDING ON THE PROJECT. f. WHERE WELDING OF HORIZONTAL SHEAR PLATE {D} OR VERTICAL SHEAR PLATE {C} ENCROACH INTO THE K-AREA (AS DEFINED IN AISC 341), THE WEB SHALL BE TESTED FOR CRACKS USING MAGNETIC PARTICLE TESTING (MT). THE MT INSPECTION AREA SHALL INCLUDE THE K-AREA BASE METAL WITHIN 3

IN. (75 MM) OF THE WELD. THE MT SHALL BE PERFORMED NO SOONER THAN 48 HOURS FOLLOWING COMPLETION OF THE WELDING

PROTECTED ZONES

INTELLECTUAL PROPERTY

I. PER AISC 341 SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS, SECTION 7.4, SPECIAL (SMF) AND INTERMEDIATE (IMF) MOMENT FRAME SYSTEMS SHALL HAVE DESIGNATED PROTECTED ZONES AS FOLLOWS:

THE PROTECTED ZONE STARTS FROM THE VERTICAL EDGE OF SIDE PLATE {A}, AWAY FROM THE COLUMN, AND ENDS 0.83 TIMES THE DEPTH OF THE BEAM, SEE SIDEPLATE® TYPICAL DETAILS. NOTE: WELD (5) AND/OR (5a) IS ACCEPTABLE IN THIS PROTECTED ZONE.

• THE PROTECTED ZONE FOR THE SIDE PLATES {A} ARE DEFINED AS A RECTANGULAR AREA CENTERED AT THE COLUMN/BEAM SEPARATION (GAP) ALONG THE TOP AND BOTTOM EDGES OF THE SIDE PLATES (A). SEE SIDEPLATE® TYPICAL DETAILS. NOTE: WELDS {1}, {2} & {7} ARE ACCEPTABLE IN THIS PROTECTED ZONE.

I. IN ORDER TO SAFEGUARD THE AUTHORIZED USE AND INTELLECTUAL PROPERTY OF THE PATENTED SIDEPLATE® CONNECTION TECHNOLOGY, THE CONTRACTOR SHALL REQUIRE ITS FABRICATION SUBCONTRACTOR TO SATISFY THE FOLLOWING REQUIREMENTS: a. A NOTICE OF INTELLECTUAL PROPERTY, IDENTICAL TO THAT PROVIDED ON THIS SHEET, SHALL BE AFFIXED ON EACH SHEET OF SHOP DETAIL AND FIELD ERECTION DRAWINGS CONTAINING SIDEPLATE® SYSTEM INFORMATION WHICH DISCLOSES IN ANY WAY THE SIDEPLATE® CONNECTION CONCEPT PRIOR

ARCHITECT/ENGINEERS:

TO RELEASING SUCH INFORMATION FOR ITS INTENDED USE. SUCH NOTICE SHALL BE PROVIDED TO THE CONTRACTOR'S FABRICATION SUBCONTRACTOR BY SIDEPLATE SYSTEMS, INC. IN A FORMAT (E.G. WORD OR AUTOCAD) SUITABLE TO THE NEEDS OF THE FABRICATION SUBCONTRACTOR'S DETAILER. b. PATENT LABEL SHALL BE APPLIED ON THE OUTSIDE FACE OF ONE OF THE TWO BOTTOM HORIZONTAL STIFFENER PLATES (D), OF EACH MOMENT CONNECTION (SEE GRAPHIC NO. 5) AND ON ONE END OF THE FULL LENGTH BEAM WEB BETWEEN THE TOP AND BOTTOM COVER PLATES {B} (SEE GRAPHIC NO.8), IN COMPLIANCE WITH THE PATENT AND INTELLECTUAL PROPERTY LAWS OF THE UNITED STATES OF AMERICA.

CONSTRUCTION GUIDELINES

1. THE CONTRACTOR SHALL ASSUME FULL AND COMPLETE RESPONSIBILITY FOR THE MEANS AND METHODS OF CONSTRUCTING THE STEEL FRAME USING THE SIDEPLATE® CONNECTION SYSTEM. CONSTRUCTION MEANS AND METHODS SHALL BE COMPLIANT WITH THE CURRENT PROVISIONS OF AWS D1.1, AND WITH THE CONSTRUCTION

GUIDELINES PROVIDED HEREIN; AND SHALL INCLUDE, BUT ARE NOT LIMITED TO: a. DIMENSIONAL VERIFICATION AND CONTROL b. FILLET WELD END PROFILE AND HOLDBACK DISTANCES FROM EDGE OF PLATE

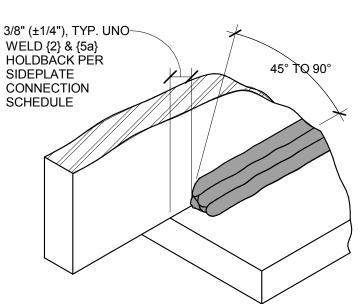
STEEL DETAILING AND ERECTION DRAWINGS FABRICATION AND ERECTION PROCEDURES (INCLUDING METHODS FOR CONTROLLING DISTORTION DUE TO WELD SHRINKAGE, AND FOR CONTROLLING COMBINED MILL, FABRICATION AND ERECTION TOLERANCES)

. WELDING PROCEDURES WELDING SEQUENCE OF FABRICATED AND ERECTED ELEMENTS

QUALITY CONTROL MEASURES CONSTRUCTION STRUCTURES SUCH AS ERECTION RIGGING AND SHORING 2. THE SEQUENCE OF CONSTRUCTION OPTIONS PROVIDED BELOW IN THESE CONSTRUCTION GUIDELINES HAVE PROVEN TO BE SUCCESSFUL BY STEEL FABRICATORS AND ERECTORS TO COST EFFICIENTLY CONSTRUCT THE SIDEPLATE® CONNECTION SYSTEM. VARIATIONS TO THESE CONSTRUCTION SEQUENCE OPTIONS PROVIDED

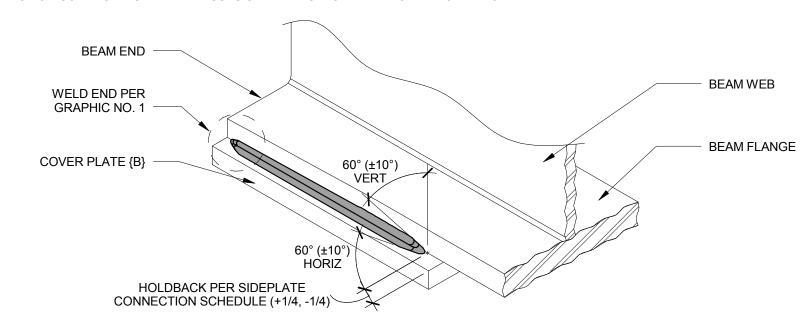
BELOW SHALL BE SUBMITTED FOR REVIEW AND DISPOSITION TO SIDEPLATE SYSTEMS, INC. 3. A PRE-FABRICATION KICK-OFF MEETING WITH A SIDEPLATE SYSTEMS, INC REPRESENTATIVE IS REQUIRED FOR ALL PROJECTS. 4. WELD END PROFILE OF FILLET WELDS:

a. THE START AND STOP OF FILLET WELDS {1}, {2}, {3}, {4}, {5a}, {6} AND {7} SHALL BE ACCOMPLISHED BY STEPPED STRINGER PASSES STARTING FROM EACH END OF ROOT PASS. STEPPED PASSES SHALL BE STACKED AT AN ANGLE THAT IS BETWEEN 45° AND 90° WITHOUT OVERLAPPING, UNO. b. START OR STOP FILLET WELDS AS DEFINED BELOW IN GRAPHIC NO. 1. NO WRAP AROUND WILL BE ALLOWED



GRAPHIC NO. 1 - FILLET WELD END PROFILE FOR FILLET WELDS {1}, {2}, {3}, {4}, {5a}, {6} AND {7}

c. THE END OF FILLET WELD {5}, <u>FURTHEST FROM BEAM END</u>, SHALL BE ACCOMPLISHED BY STEPPED STRINGER PASSES STARTING FROM THE END OF THE PREVIOUSLY DEPOSITED STRINGER PASS. THE ROOT PASS SHALL START A DISTANCE FROM END OF COVER PLATE {B} PER THE HOLDBACKS CALLED OUT IN THE SIDEPLATE CONNECTION SCHEDULE. STEPPED PASSES SHALL BE STACKED PER GRAPHIC 2 BELOW

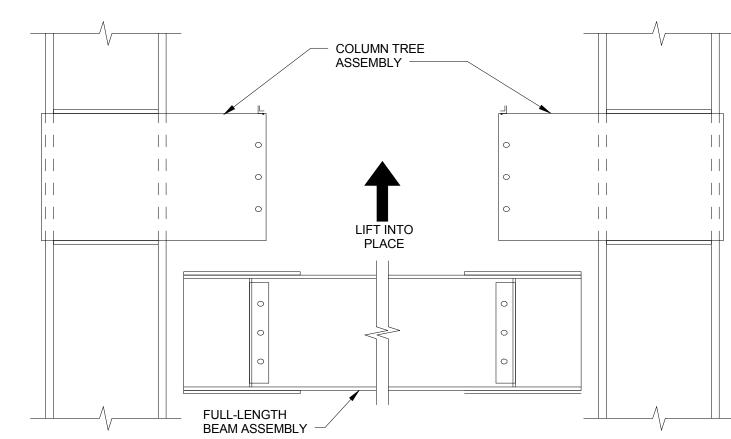


GRAPHIC NO. 2 - WELD END PROFILE & TERMINATION OF FILLET WELD {5}, FURTHEST FROM BEAM END

d. NON-COMPLIANCE WITH WELD END PROFILES SHALL BE DOCUMENTED AND SUBMITTED TO SIDEPLATE SYSTEMS, INC. FOR REVIEW AND e. THE START, STOP AND APPLICABLE PROFILE OF EACH FILLET WELD END SHALL BE NOTED ON THE SHOP DRAWINGS.

SHOP FABRICATION OF THE SIDEPLATE FRAME® SYSTEM

(THE SIDEPLATE FRAME® SYSTEM CONSISTS OF FIELD LIFTING AND PLACING A FULL-LENGTH BEAM ASSEMBLY BETWEEN SIDE PLATES (A) OF OPPOSING COLUMN TREE



GRAPHIC NO. 3 SIDEPLATE FRAME® SYSTEM FIELD ERECTION METHOD

1. COLUMN TREE ASSEMBLY FOR UNIAXIAL CONNECTIONS (CONSISTS OF COLUMN SECTION, TOP AND BOTTOM HORIZONTAL SHEAR PLATES {D}, AND SIDE PLATES {A}). a. TACK SIDE PLATES (A) AND HORIZONTAL SHEAR PLATES (D) TO THE COLUMN.

 QC INSPECTIÓN SHALL PROVIDE VERIFICATION THÁT ACTUAL COLUMN FLANGE WIDTH IS AT LEAST NOMINAL COLUMN FLANGE WIDTH WHERE THE SIDE PLATES (A) ARE TO BE INSTALLED. IN THE UNLIKELY EVENT ACTUAL COLUMN FLANGE WIDTH IS LESS THAN NOMINAL, BUT WITHIN AISC STANDARD MILL TOLERANCES (-3/16" MAX). CONTACT SIDEPLATE SYSTEMS FOR APPROPRIATE RECOMMENDATIONS.

WELD HORIZONTAL SHEAR PLATES (D) TO COLUMN WEB USING FILLET WELDS (3) ON OUTER FACE OF PLATE. WHEN WELD (3) OCCURS ON THE COLUMN FLANGES, A WELD TIE-IN OF FILLET WELDS {3} SHALL NOT BE ALLOWED ACROSS THE CLIPPED CORNER OF HORIZONTAL SHÉAR PLATE {D} AT THE K-LINE AREA.

SEE PREPARATION NOTE 4.a. WELD HORIZONTAL SHEAR PLATES (D) TO SIDE PLATE (A) USING FILLET WELD (1) TEMPORARILY MAINTAIN FLARED-OUT SEPARATION OF SIDE PLATES (A), IN ANTICIPATION OF WELD (2) SHRINKAGE EFFECTS, BY SUITABLE CONSTRUCTION AIDS (SUCH AS ANGLE IRON 'DOGS', PIPES OR STRUTS) AT THE TOP AND BOTTOM OF THE SIDE PLATE {A}. THEY MAY BE CUT TO FIT AND BEAR ON THE INSIDE FACE OF

THE SIDE PLATES OR CUT LONG AND TACKED TO THE EDGES OF THE SIDE PLATES. SUCH CONSTRUCTION AIDS ACT AS SPACERS DURING THE WELDING AND SUBSEQUENT COOL DOWN OF FILLET WELDS {2}. SEE GRAPHIC NO. 4.

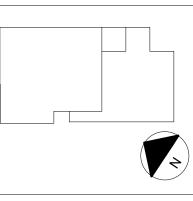
NOTICE OF INTELLECTUAL PROPERTY The SIDEPLATE® steel frame connection system described herein is PATENTED technology protected and covered by one or more of U.S. patent nos. 5,660,017; 6,138,427; 6,516,583; 6,591,573; 7,178,296; 8,122,671; 8,122,672; 8,146,322 where the support of the support 8,176,706 and 8,205,408; other U.S. and foreign patents pending; and also contains trade secret information that is PROPRIETARY to SidePlate Systems, Inc. [tel (800) 475-2077 and (949) 305-7889, fax (949) 305-6395; www.sideplate.com].

Copyright© 2012 SidePlate Systems, Inc. all rights reserved. Without limitation, this drawing and the information herein may be used by others solely (i) upon payment in full of SidePlate® License Fee to SidePlate systems, Inc. and (ii) in connection with the design, construction, operation, repair, maintenance, restoration or demolition of the building(s) specifically identified herein, all other uses being expressly prohibited.

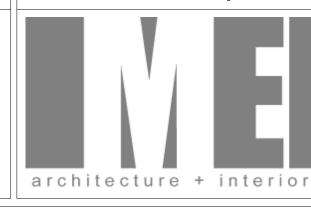
CONSULTANTS:







KEY PLAN



239 9TH STREET, SUITE 201 SAN FRANCISCO, CA 94103 T (415) 682-7376 F (415) 682-7339

Drawing Title SIDEPLATE GENERAL NOTES (1 OF 2)

Approved: Project Director

CONSOLIDATE / EXPAND **MEDICAL PROCEDURES** MINOR (CEMP) **VANCHCS - MATHER, CA**

Building Number Drawing Number

Project Number

612-111

Facilities Management

Veterans Affairs

Office of

HART MORGAN **FULLY SPRINKLERED**

BRETT

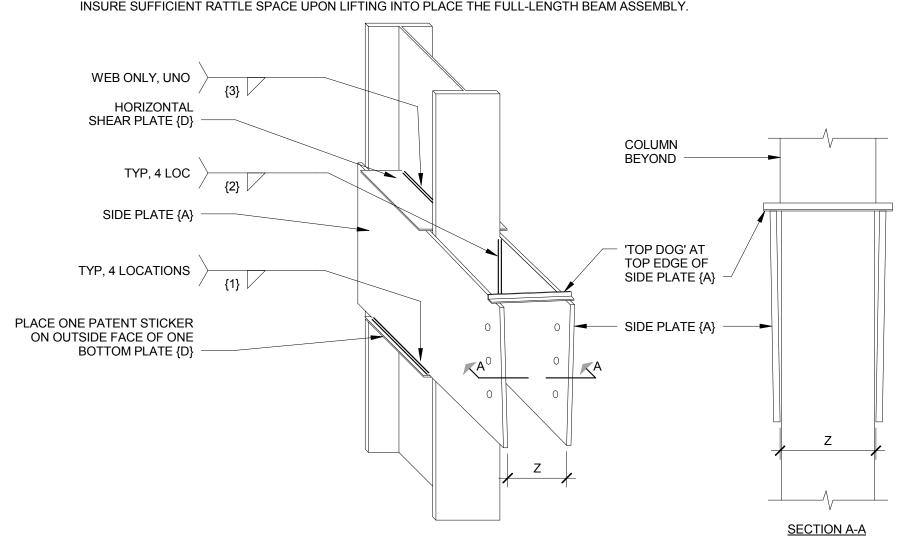
100% CONSTRUCTION DOCUMENTS

Date

METAL WITHIN 3 INCHES

GRAPHIC NO. 4 - COLUMN TREE ASSEMBLY READY FOR WELD {2}

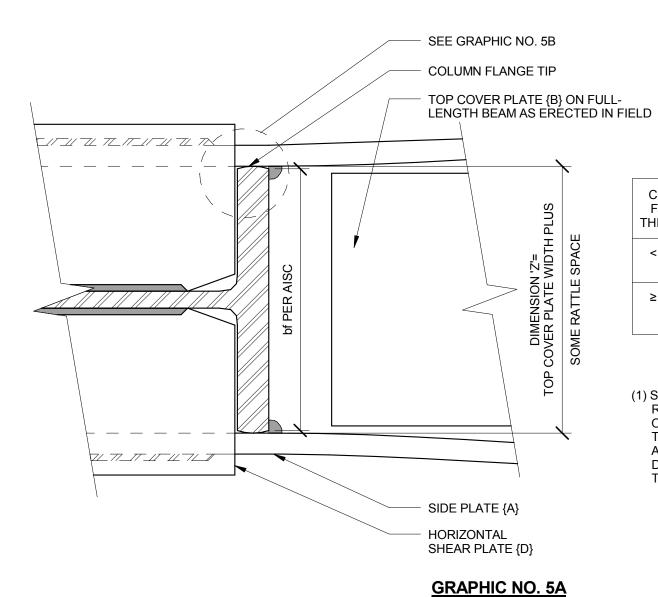
- e. WELD INSIDE FACE OF SIDE PLATES (A) TO THE FLANGE TIPS OF COLUMN USING FILLET WELDS (2). REFER TO GRAPHIC NO 5A FOR CONDITIONS WITH NON-SQUARE AFTER COOL DOWN OF COMPLETED FILLET WELDS {2}, REMOVE ALL CONSTRUCTION AIDS EXCEPT FOR THE ONE AT THE TOP OF SIDE PLATES {A} AND THEN VERIFY DIMENSION 'Z' AT BOTTOM OF SIDE PLATES (A). DIMENSION 'Z' IS THE REQUIRED CLEARANCE FOR INSERTING THE FULL-LENGTH BEAM ASSEMBLY. REFER TO NOTE 1A
 - IF CLEARANCE VERIFICATION IS SUFFICIENT, A SUITABLE ERECTION AID (AKA 'TOP DOG') SHALL BE WELDED TO THE TOP EDGE OF THE SIDE PLATES (A). IT SHALL BE SUFFICIENTLY STRONG TO REMAIN IN PLACE DURING TRANSPORTATION AND ERECTION OF FULL-LENGTH BEAM (NOTE THIS CONSTRUCTION AID WILL BE UNDER LOAD AND CARE SHALL BE TAKEN WHEN REMOVING). IF CLEARANCE VERIFICATION IS NOT SUFFICIENT, FLEX SIDE PLATES (A) BY JACKING THEM APART TO A DIMENSION GREATER THAN THE WIDTH OF COLUMN FLANGE (MAXIMUM SEPARATION SHALL NOT EXCEED WIDTH OF COLUMN FLANGE PLUS THICKNESS OF ONE SIDE PLATE (A) UP TO 1" MAX WITHOUT APPROVAL FROM SIDEPLATE SYSTEMS, INC.) TO COMPENSATE FOR THE SHRINKAGE EFFECT OF FILLET WELDS {2} ON MAINTAINING PARALLEL ALIGNMENT BETWEEN SIDE PLATES {A}. ONCE NECESSARY CLEARANCE HAS BEEN ESTABLISHED, A SUITABLE ERECTION AID (AKA 'TOP DOG') SHALL THEN BE WELDED TO TOP EDGE OF SIDE PLATES (A). IT SHALL BE SUFFICIENTLY STRONG TO REMAIN IN PLACE DURING TRANSPORTATION AND ERECTION OF FULL-LENGTH
- BEAM (NOTE THIS CONSTRUCTION AID WILL BE UNDER LOAD AND CARE SHALL BE TAKEN WHEN REMOVING). 1A. THE FOLLOWING FABRICATION AND SEPARATION MEASURES ARE IMPLEMENTED AND MAINTAINED THROUGH DELIVERY TO THE FIELD IN ORDER TO FACILITATE THE LIFTING INTO PLACE OF THE FULL-LENGTH BEAM ASSEMBLY BETWEEN SIDE PLATES (A) OF OPPOSING COLUMN ASSEMBLIES. a. MAINTAIN SUFFICIENT SEPARATION BETWEEN THE INTERIOR FACES OF SIDES PLATES (A) (DENOTED HEREAFTER AS DIMENSION 'Z' - SEE GRAPHIC NO. 5) TO



GRAPHIC NO. 5 - COMPLETED SIDEPLATE® FRAME COLUMN TREE ASSEMBLY

b. THE 'Z' DIMENSION SHALL EXTEND AND BE MAINTAINED ANYWHERE IN BETWEEN THE SIDE PLATES FROM TOP TO BOTTOM. c. THE FABRICATOR MAY PROVIDE A RATTLE SPACE OF APPROXIMATELY 1/4" BETWEEN THE INSIDE FACES OF SIDE PLATES (A) AND THE WIDTH OF THE TOP COVER PLATE (B) OF THE FULL-LENGTH BEAM ASSEMBLY. d. IN ADDITION TO THE USE OF SEPARATION METHODS PREVIOUSLY IDENTIFIED, THE DETAILED WIDTH OF TOP COVER PLATE (B) CAN BE CORRESPONDINGLY DIMENSIONED TO BE THE COLUMN FLANGE NOMINAL WIDTH OR UP TO 1/8" LESS AT THE FABRICATOR'S DISCRETION. THE REDUCTION IN WIDTH OF THE TOP COVER PLATE (B) SHALL BE BASED ON THE FABRICATOR'S EXPERIENCE WITH THE TYPICAL MILL OVERRUN IN COLUMN FLANGE WIDTH FOR THE COLUMN SECTIONS BEING USED. THE PROPER DETAILED DIMENSIONING OF THE TOP COVER PLATE (B) IS TO FACILITATE ERECTION CLEARANCE DURING THE LIFTING INTO PLACE OF FULL-LENGTH BEAM ASSEMBLY SEE GRAPHIC NO. 5A. IT'S IMPORTANT TO MAINTAIN SUFFICIENT EDGE DISTANCE BETWEEN THE LONGITUDINAL EDGE OF COVER PLATE (B) AND THE CORRESPONDING FLANGE TIP OF THE BEAM FOR PLACEMENT OF WELD (5). • THE STRUCTURAL STEEL DETAILER SHALL CONSIDER THE SUGGESTED DETAILED WIDTH OF TOP COVER PLATE (B) FOUND IN THE TABLE IN GRAPHIC NO.

5A WHICH IS BASED ON AVERAGES OF MILL TOLERANCE OVERRUNS IN COLUMN FLANGE WIDTHS REPORTED BY EXPERIENCED FABRICATORS.



Date

5/8/2014 2:21:55 PM

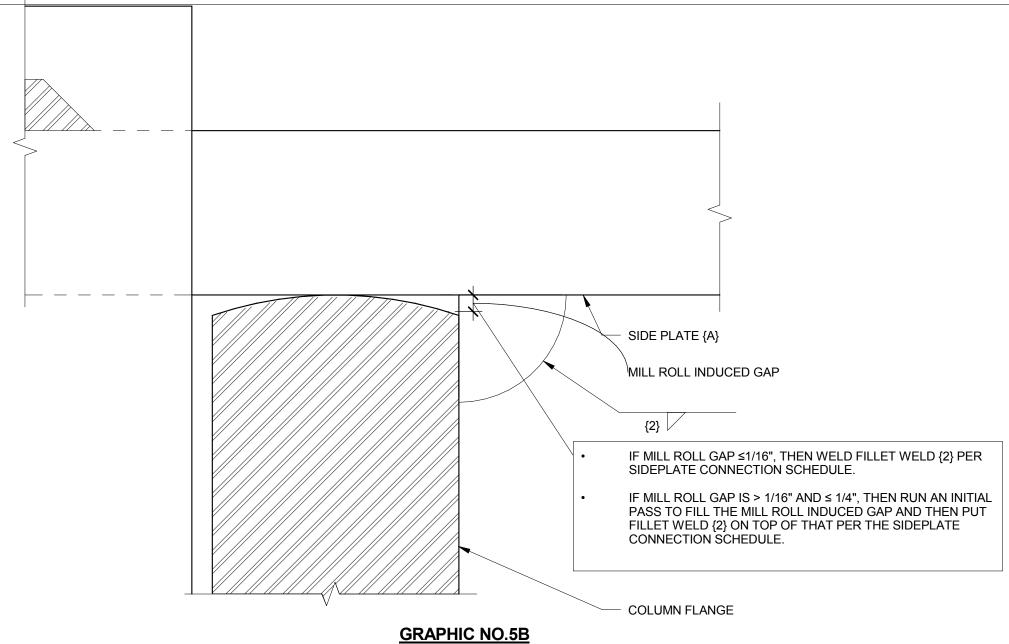
16

Issues & Revisions:

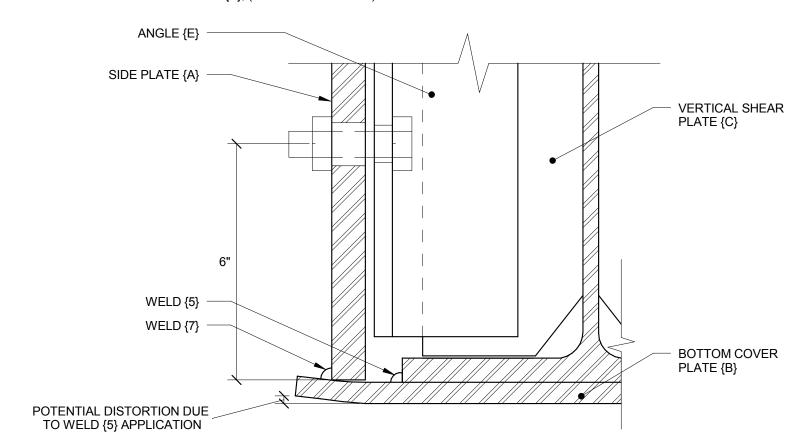
VA FORM 08-6231, OCT 1978

COLUMN FLANGE THICKNESS	REPORTED (1) AVERAGE MILL OVERRUNS	SUGGESTED (1) DETAILED WIDTH OF TOP COVER PLATE {B}	POTENTIAL RATTLE SPACE					
< 1 1/2"	0- 3/16"	(NOMINAL COLUMN FLANGE WIDTH)-1/8"	1/8" - 5/16"					
≥ 1 1/2"	1/8" - 5/16"	(NOMINAL COLUMN FLANGE WIDTH)-1/16"	3/16" -3/8"					
TOP COVER PLATE {B} WIDTH TABLE								

(1) SIDEPLATE SYSTEMS, INC. ASSUMES NO RESPONSIBILITY FOR ACTUAL PROJECT SPECIFIC MILI OVER RUNS AND HOW SUCH OVER RUNS MAY AFFECT THE FIT-UP IN THE FIELD. STRUCTURAL STEEL DETAILER AND FABRICATOR SHALL WORK CLOSELY TO DETERMINE THE APPROPRIATE DETAILED WIDTH OF TOP COVER PLATE {B}.

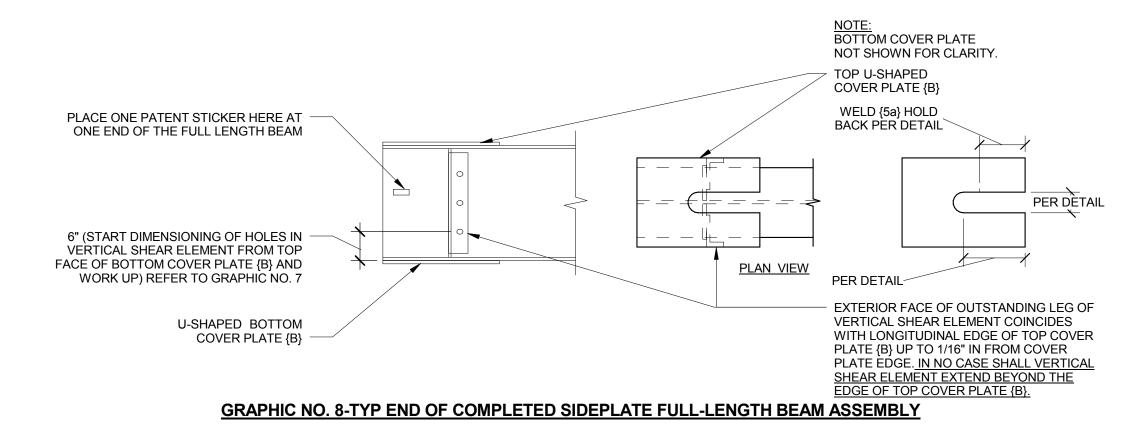


- e. QC INSPECTION SHALL PROVIDE A HOLD POINT AFTER PLACEMENT OF WELD {2}, COOLING OF WELD {2} AND REMOVAL OF ALL CONSTRUCTION AIDS EXCEPT FOR 'TOP DOG' TO VERIFY MINIMUM DIMENSION 'Z' ANYWHERE IN BETWEEN THE SIDE PLATES FROM TOP TO BOTTOM, AND TO ASCERTAIN IF REQUIRED RATTLE SPACE WILL BE PROVIDED BASED ON THE DETAILED WIDTH OF TOP COVER PLATE {B} (SEE GRAPHIC NO. 5).
- f. FOR THE PURPOSE OF SETTING TOP OF STEEL OF THE FULL-LENGTH BEAM, THE DIMENSIONING OF ERECTION BOLT HOLES IN SIDE PLATES (A) SHALL START AND BE REFERENCED FROM THE BOTTOM EDGE OF SIDE PLATES {A}.
- 2. FULL-LENGTH BEAM ASSEMBLY: (CONSISTS OF A FULL-LENGTH BEAM, TOP AND BOTTOM COVER PLATES {B}, AND VERTICAL SHEAR ELEMENT (OPTIONS 1, 2, 3): a. PRIOR TO CUTTING COVER PLATES {B}, IT IS HIGHLY RECOMMENDED THAT A SUFFICIENT RANDOM SAMPLING OF ACTUAL COLUMN FLANGE WIDTH DIMENSIONS BE MADE SO THAT THE AS-DETAILED COVER PLATE (B) WIDTH AND RATTLE SPACE CAN BE VERIFIED. IF THERE IS A DISCREPANCY, AN ADJUSTMENT IN THE COVER
- b. AS BEST AS POSSIBLE, BOTTOM COVER PLATE {B} SHALL BE PLACED PERPENDICULAR TO THE WEB OF BEAM, REGARDLESS OF POSSIBLE FLANGE TILT (AS c. QC INSPECTION SHALL PROVIDE HOLD POINT FOR VERIFICATION OF PERPENDICULAR ALIGNMENT BETWEEN TOP FACE OF BOTTOM COVER PLATE (B) AND WEB OF
- FULL-LENGTH BEAM, TO MINIMIZE, IF NOT ELIMINATE ANY POTENTIAL ROOT GAP BETWEEN BOTTOM EDGE OF EACH SIDE PLATE (A) AND TOP FACE OF THE BOTTOM COVER PLATE {B}, WHEN THE FULL-LENGTH BEAM HAS BEEN LIFTED INTO PLACE.
- d. CUTTING OF THE 'U'-SHAPED SLOT SHALL BE ACCOMPLISHED BY DRILLING AND SAW CUT OR BY THERMAL CUTTING. PROCESS CAN BE AUTOMATED OR BY HAND. SURFACE OF THE CUT SHALL BE FINISHED PER SECTION 2. AND 3. OF 'PREPARATION'. e. TACK WELDING THE COVER PLATES (B) IN THE BEAM'S PROTECTED ZONE SHALL NOT BE PERMITTED.
- f. WELD BEAM FLANGE COVER PLATES (B) TO BEAM USING FILLET WELDS (5) (SEE GRAPHIC NO 2) AND (5a) (SEE GRAPHIC NO. 1) BEFORE TACK WELDING THE VERTICAL SHEAR ELEMENT (I.E. THIS IS A DISTORTION CONTROL METHOD THAT IS RECOMMENDED, DUE TO THE POTENTIAL WARPING EFFECTS OF WELD (5) ON
- j. FOR THE PURPOSE OF SETTING THE TOP OF STEEL ELEVATION OF THE FULL-LENGTH BEAM, THE DIMENSIONING OF THE BOLT HOLES IN THE OUTSTANDING LEG OF THE VERTICAL SHEAR ELEMENT SHALL START AND BE REFERENCED 6 INCHES FROM THE TOP FACE OF THE BOTTOM COVER PLATE (B) THAT IS WELDED IN PLACE. IF THE BOTTOM COVER PLATE (B) HAS DISTORTION OR A CUPPING UPWARD EFFECT DUE TO WELD (5), GENERAL AREA HEATING MAY BE APPLIED TO THE BOTTOM COVER PLATE (B) IN ORDER TO REMOVE THE CUPPING UPWARD AFFECT ALONG THE ENTIRE LENGTH OF THE COVER PLATE (B). ALTERNATELY, THE THICKNESS OF SIDE PLATE (A) SHALL BE CONSIDERED WHEN PLACING THE VERTICAL SHEAR ELEMENT AS TO WHEN THE SIDE PLATE (A) WILL FIRST MAKE CONTACT WITH THE TOP FACE OF BOTTOM COVER PLATE {B}, (SEE GRAPHIC NO. 7).

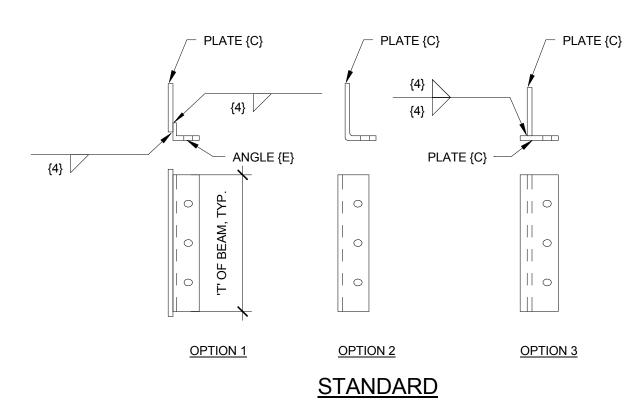


GRAPHIC NO. 7

h. THE ENTIRE EXTERIOR FACE OF THE OUTSTANDING LEG OF THE VERTICAL SHEAR ELEMENT SHALL BE PLACED PARALLEL TO THE WEB OF THE FULL-LENGTH BEAM, AND SHALL ALSO DEFINE A VERTICAL PLANE THAT COINCIDES WITH THE LONGITUDINAL EDGE OF TOP COVER PLATE {B} OR A 1/16" IN FROM EDGE. i. QC INSPECTION SHALL PROVIDE HOLD POINT FOR VERIFICATION OF THE PLACEMENT OF THE VERTICAL SHEAR ELEMENT AND ITS VERTICAL HOLE ALIGNMENTS PER PROVISION OF INSTRUCTION "f)", "g)" AND "h)") ABOVE (SEE GRAPHIC NO. 8).



WELD ONE VERTICAL SHEAR ELEMENT OPTION (1, 2, 3) PER GRAPHIC NO. 9 TO BEAM WEB, USING CONTINUOUS FILLET WELDS (4) - EACH SIDE OF BEAM WEB. U.N.O, THE VERTICAL SHEAR ELEMENT SHALL NOT BE WELDED OR TACK WELDED TO BEAM FLANGES FOR OPTION 1, 2 & 3. REFER TO GRAPHIC NO. 9 FOR VERTICAL SHEAR ELEMENT OPTIONS.

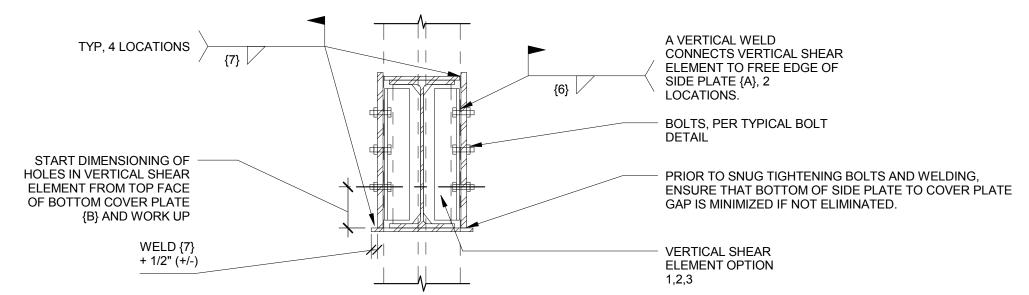


GRAPHIC NO. 9- VERTICAL SHEAR ELEMENT OPTIONS FOR FULL-LENGTH BEAM ASSEMBLY

FIELD ERECTION OF COMPLETED SIDEPLATE FRAME® SYSTEM

(CONSISTS OF JOINING FULL-LENGTH BEAM ASSEMBLY TO COLUMN TREE ASSEMBLIES)

- 1. INSERT FULL-LENGTH BEAM ASSEMBLY INTO OPPOSING COLUMN ASSEMBLIES WITH UP TO 1/4" RATTLE SPACE. a. LIFT FULL-LENGTH BEAM ASSEMBLY UP INTO PLACE (SEE GRAPHIC NO. 3), AND INSERT BOLTS.
- IN THE EVENT THAT A BEAM IS NOT POSSIBLE TO LIFT INTO PLACE BETWEEN THE SIDE PLATES, CONTACT SIDEPLATE SYSTEMS, INC IMMEDIATELY FOR REVIEW AND DISPOSITION. SPREADING OF THE SIDE PLATES IN THE FIELD IS NOT ALLOWED WITHOUT PRIOR WRITTEN APPROVAL BY SIDEPLATE SYSTEMS, INC.
- b. CAREFULLY REMOVE TEMPORARY 'TOP DOG' WHICH IS UNDER LOAD. 'TOP DOG' ATTACHMENT WELD MAY REMAIN AND IS NOT NECESSARY TO BE GROUND FLUSH c. INSTALL BOLTS WHICH SERVE AS A CLAMPING DEVICE TO PULL SIDE PLATES (A) IN AS CLOSE AS POSSIBLE TO THE LONGITUDINAL EDGES OF TOP COVER PLATE (B) THEREBY MINIMIZING ANY, IF NOT ELIMINATING, POSSIBLE ROOT GAP(S). BOLTS SHALL BE SNUG TIGHTENED. SEE GRAPHIC NO. 10. IF THERE ARE ROOT GAPS, ALL EFFORTS SHOULD BE MADE TO SPLIT THE DIFFERENCE BETWEEN TOP COVER PLATE (B) AND SIDE PLATES (A), AS WELL AS BOTTOM OF SIDE PLATE (A) TO TOP FACE
- ROOT GAPS GREATER THAN 1/16" AND UP TO 1/4" ARE ACCEPTABLE WITH THE FILLET WELD {7} BEING INCREASED BY THE GAP AMOUNT. ROOT GAPS GREATER THAN 1/4" BUT NOT MORE THAN 3/8" SHALL BE DOCUMENTED. A PQR TYPE TEST PLATE ASSEMBLY WILL BE REQUIRED. TEST CONFIGURATION AND RESULTS SHALL BE SUBMITTED TO SIDEPLATE SYSTEMS, INC. AND EOR FOR REVIEW AND DISPOSITION. CONTACT SIDEPLATE d. WELD FILLET WELDS {7}, AND {6} AS OCCURS.



GRAPHIC NO. 10- SECTIONS THROUGH FULL-LENGTH BEAM ASSEMBLY END OF COMPLETED SIDEPLATE FRAME® SYSTEM

2. COLUMN/BEAM SEPARATION (GAP) CLOSURE

- a. PROVIDE A FOLDED STRIP OF LIGHT GAGE METAL, OR SIMILAR, SECURED TO STEEL SURFACES BY DUCT TAPE (OR A TACK WELD LOCATED AS CLOSE AS POSSIBLE TO THE MID SECTION OF BEAM FLANGE COVER PLATE (B)) ACROSS THE PHYSICAL COLUMN/BEAM SEPARATION (GAP) BETWEEN THE TOP BEAM FLANGE COVER PLATE (B) AND THE FACE OF COLUMN FLANGE, TO PREVENT CONCRETE FILL FROM ENTERING THROUGH THE TOP SEPARATION, AND WHEN
- APPLICABLE, TO PROVIDE SOME BACKING FOR FIREPROOFING ACROSS THE BOTTOM SEPARATION. b. IN NO CASE SHALL THE FOLDED STRIP OF LIGHT GAGE METAL BE WELDED TO THE EDGE OF SIDE PLATE {A}, OR TO THE FACE OF COLUMN FLANGE TO ACHIEVE CLOSURE OF THE PHYSICAL COLUMN/BEAM SEPARATIONS.
- a. WHEN REQUIRED BY THE GOVERNING CODE FOR CERTAIN TYPES OF CONSTRUCTION, SIDEPLATE® CONNECTIONS SHALL HAVE A FIRE-RESISTANCE RATING LIKE THAT
- OF A STEEL "STRUCTURAL FRAME". b. THE MINIMUM THICKNESS OF SPRAYED ON FIRE-RESISTIVE MATERIAL (SFRM) FOR STEEL SIDEPLATE® CONNECTIONS PLATES, NOT ENCASED IN CONCRETE, SHALL BE DETERMINED JUST LIKE THAT OF A PIPE/TUBE COLUMN SECTION WITH A CONSTANT STEEL WALL THICKNESS USING THE THICKNESS OF SIDE PLATE (A) FOR EACH SIDEPLATE CONNECTION ID PER THE SIDEPLATE CONNECTION SCHEDULE, WHICH ARE UNIFORMLY HEATED AND PROTECTED (THE FIRE EXPOSURE OF A PIPE/TUBE COLUMN IS DIRECTLY ANALOGOUS TO A PLATE WITH A 1-SIDED FIRE EXPOSURE AND PROTECTION). THE SFRM SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ASTM
- E119 AND LISTED FOR FIRE RESISTIVE PIPE/TUBE COLUMN APPLICATIONS FOR NO LESS THAN THE REQUIRED RATED TIME. c. THE CONTRACTOR SHALL PROVIDE THE MEANS (TYPICALLY DONE WITH A LAYERING TECHNIQUE) FOR FIREPROOFING ACROSS THE PHYSICAL COLUMN/BEAM SEPARATION (GAP) BETWEEN THE BOTTOM BEAM FLANGE COVER PLATE {B} AND THE FACE OF THE COLUMN FLANGE. (IF CLOSURE IS REQUIRED FOLLOW GUIDELINES ABOVE IN ITEM 2a & 2b).
- a. THE CONTRACTOR SHALL IDENTIFY THE PROTECTED ZONES ON BOTH THE BEAM AND THE SIDE PLATES BY USING ANY SUITABLE NON-DESTRUCTIVE MEANS.
- b. ONCE THE STEEL DECKING IS IN PLACE, THE CONTRACTOR SHALL USE ANY SUITABLE NON-DESTRUCTIVE MEANS TO IDENTIFY THE PROTECTED ZONE PRIOR TO THE INSTALLATION OF SHEAR STUDS AND DECK ATTACHMENTS, ETC.
- c. AFTER SPRAYED ON FIRE-RESISTIVE MATERIAL HAS BEEN APPLIED, THE CONTRACTOR SHALL USE ANY SUITABLE NON-DESTRUCTIVE MEANS TO IDENTIFY THE
- PROTECTED ZONES, FOR OTHER DISCIPLINES TO PRECLUDE WELDED OR SHOT IN ATTACHMENTS, ETC. d. NOTE: WELDS {1}, {2}, {5a} AND {7} ARE ALLOWED IN THE PROTECTED ZONES, AS DETAILED.

NOTICE OF INTELLECTUAL PROPERTY The SIDEPLATE® steel frame connection system described herein is PATENTED technology protected and covered by one or more of U.S. patent nos. 5,660,017; 6,138,427; 6,516,583; 6,591,573; 7,178,296; 8,122,671; 8,122,672; 8,146,322 and covered by one or more of U.S. patent nos. 5,660,017; 6,138,427; 6,516,583; 6,591,573; 7,178,296; 8,122,671; 8,146,322 and covered by one or more of U.S. patent nos. 5,660,017; 6,138,427; 6,516,583; 6,591,573; 7,178,296; 8,122,671; 8,122,672; 8,146,322 and covered by one or more of U.S. patent nos. 5,660,017; 6,138,427; 6,516,583; 6,591,573; 7,178,296; 8,122,671; 8,146,322 and covered by one or more of U.S. patent nos. 5,660,017; 6,138,427; 6,516,583; 6,591,573; 7,178,296; 8,122,671; 8,146,322 and covered by one or more of U.S. patent nos. 5,660,017; 6,138,427; 6,516,583; 6,591,573; 7,178,296; 8,142,671; 8,142,672; 8,146,322 and covered by one or more of U.S. patent nos. 5,660,017; 6,138,427; 6,516,583; 6,591,573; 7,178,296; 8,142,671; 8,142,672; 8,146,322 and covered by one or more of U.S. patent nos. 5,660,017; 6,138,427; 6,516,583; 6,591,573; 7,178,296; 8,142,671; 8,142,672; 8,146,322 and covered by one or more of U.S. patent nos. 5,660,017; 6,138,427; 6,516,583; 6,591,573; 7,178,296; 8,142,671; 8,142,672; 8,146,322 and covered by one or more of U.S. patent nos. 5,660,017; 6,138,427; 6,516,583; 6,591,573; 7,178,296; 8,142,672; 8,146,322 and covered by one of U.S. patent nos. 5,660,017; 6,138,427; 6,516,423; 8,176,706 and 8,205,408; other U.S. and foreign patents pending; and also contains trade secret information that is PROPRIETARY to SidePlate Systems, Inc. [tel (800) 475-2077 and (949) 305-7889, fax (949) 305-6395; www.sideplate.com].

Copyright© 2012 SidePlate Systems, Inc. all rights reserved. Without limitation, this drawing and the information herein may be used by others solely (i) upon payment in full of SidePlate® License Fee to SidePlate Systems, Inc. and (ii) in connection with the design, construction, operation, repair, maintenance, restoration or demolition of the building(s) specifically identified herein, all other uses being expressly prohibited.

Drawing Title Project Title **Project Number CONSULTANTS: KEY PLAN ARCHITECT/ENGINEERS:** 612-111 CONSOLIDATE / EXPAND SIDEPLATE GENERAL NOTES Office of **MEDICAL PROCEDURES** (2 OF 2) Building Number **Facilities** MINOR (CEMP) Management Approved: Project Director Drawing Number **VANCHCS - MATHER, CA** 239 9TH STREET, SUITE 201 25909 PALA, STE 200, MISSION VIEJO CA 92691 SAN FRANCISCO, CA 94103 **BRETT CYNTHIA**

T (415) 682-7376 F (415) 682-7339

HART

MORGAN

Veterans Affairs

CLIP CORNERS SUCH THAT THE WELD FROM PLATE (D) TO THE COLUMN WEB STARTS AND STOPS DIM B MINUS HORIZONTAL A DISTANCE OF 1 1/2" FROM THE HORIZONTAL HORIZONTAL SHEAR PLATE (D) TANGENT OF THE FLANGE TO THE BEAM DEPTH SHEAR PLATE (D) SHEAR PLATE (D) + 1/2" (+/-) WEB FILLET (I.E., THE AISC 'k' DIMENSION) WHEN COLUMN IS GAP UP TO 1/8" PERMISSIBLE GREATER THAN W16x WHERE NO WELD TO FLANGES +1/2" (+/-) HOLD DIMENSION SIDE PLATE (A) -BEAM DEPTH -TO BE SHOWN SIDE PLATE (A) ON THE SHOP COLUMN WEB — DRAWINGS, TYP COLUMN WEB -**POPPED OUT OPTION RECESSED OPTION** SIDE PLATE (A) TO COLUMN FLANGE (TYP 4 LOC) THIS OPTION REQUIRES WELD {3} [DEMAND CRITICAL] TO BE INSPECTED PRIOR TO INSTALLING REFER TO DETAIL 3/- FOR APPLICABILITY TO FLANGES WEB ONLY, UNO **DETAIL 1A & 2A** AT DISCONTINUOUS COLUMNS ONLY PLATE {D} TO SIDE PLATE {A} DETAIL 1A & 2A GRAVITY BEAM OR GIRDER GRAVITY BEAM (AS OCCURS) OR GIRDER SHEAR TAB (AS OCCURS) NOTE: CONTRACTOR TO (AS OCCURS) COORDINATE CENTERLINE OF **BOLT HOLES WITH EXTENSION** HORIZONTAL OF SIDE PLATE (A) BEYOND COLUMN FLANGE AS FOR BOLT INFORMATION SHEAR PLATE (D) (TYP 4 LOC) -REQUIRED FOR OBTAINING WRENCH CLEARANCES. DETAIL 1A & 2A HORIZONTAL SHEAR PLATE {D} (TYP 4 LOC) -= = =+ 1/2" (+/-) 0'-6", UNO, COORDINATE COLUMN WEB -COLUMN WEB -COLUMN WITH DETAIL 3/-- SIDE PLATE {A} RECESSED OPTION POPPED OUT OPTION HOLDBACK WELD {2} TYP 8 LOC PER SIDEPLATE CONNECTION SCHEDULE **ELEVATION SECTION A-A**

ONE-SIDED CONNECTION COLUMN SHOP DETAIL (A-TYPE)

CLIP CORNERS SUCH THAT THE WELD FROM PLATE (D) TO THE COLUMN WEB STARTS AND STOPS A DISTANCE OF 1 1/2" FROM THE TANGENT OF THE FLANGE TO THE HORIZONTAL SHEAR PLATE WEB FILLET (I.E., THE AISC 'k' (D) (TYP 4 LOC) DIMENSION) WHEN COLUMN IS GAP UP TO 1/8" PERMISSIBLE GREATER THAN W16x WHERE NO WELD TO FLANGES HOLD DIMENSION HOLD DIMENSION -TO BE SHOWN -TO BE SHOWN ON THE SHOP ON THE SHOP DRAWINGS, TYP DRAWINGS, TYP SIDE PLATE {A} TO COLUMN FLANGE (TYP 4 LOC) +1/2" (+/-) [DEMAND CRITICAL] REFER TO DETAIL 3/- FOR **PLAN VIEW** APPLICABILITY TO FLANGES / WEB ONLY, UNO PLATE {D} TO SIDE PLATE {A} REFER TO 3 / SP-103 FOR BOLT INFORMATION DIRECTION \
OF ROLL 0' - 1 3/4" 0'-6", UNO, COORDINATE WITH DETAIL 3/-SIDE PLATE {A} HOLDBACK WELD {2} TYP 8 LOC PER SIDEPLATE CONNECTION SCHEDULE COLUMN **ELEVATION**

TWO-SIDED CONNECTION COLUMN SHOP DETAIL (B-TYPE)

COLUMN DESIGN BEAM DESIGN MISCELLANEOUS PLATE THICKNESS PLATE HOLD BACK **DIMENSIONS** WELD SIZE WELD HOLDBACK THICKNESS VERTICAL SHEAR ANGLE {E} & COORDINATE GRADE WITH DETAIL **COVER PLATE** COLUMN ELEMENT OPTION {A} {D} {2} {C} **{7**} {5a} 1 1/2 W18X60 2 1/4 5/16 U-Shaped L5x3x1/2 (Gr. 50) W24X U-Shaped L5x3x1/2 (Gr. 50) W24X 5/16 U-Shaped L5x3x1/2 (Gr. 50) 5/16 5/16 1, 2 or 3 W24X U-Shaped L5x3x1/2 (Gr. 50) 1/SP-104 1, 2 or 3 5/16 W24X 7/16 5/16 5/16 U-Shaped L5x3x1/2 (Gr. 50) 1, 2 or 3

SIDEPLATE A&B-TYPE CONNECTION SCHEDULE

1/2

1

NOTE: USE THIS SCHEDULE WITH DETAILS 1 & 2 / SP-102
REFER TO FULL-LENGTH BEAM DETAIL 1 & 2 ON SHEET SP-103

5/16

5/16

NOTICE OF INTELLECTUAL PROPERTY The SIDEPLATE® steel frame connection system described herein is PATENTED technology protected and covered by one or more of U.S. patent nos. 5,660,017; 6,138,427; 6,516,583; 6,591,573; 7,178,296; 8,122,671; 8,122,672; 8,146,322 and covered by one or more of U.S. patent nos. 5,660,017; 6,138,427; 6,516,583; 6,591,573; 7,178,296; 8,122,671; 8,122,672; 8,146,322 and covered by one or more of U.S. patent nos. 5,660,017; 6,138,427; 6,516,583; 6,591,573; 7,178,296; 8,122,671; 8,122,672; 8,146,322 and covered by one or more of U.S. patent nos. 5,660,017; 6,138,427; 6,516,583; 6,591,573; 7,178,296; 8,122,671; 8,122,672; 8,146,322 and covered by one or more of U.S. patent nos. 5,660,017; 6,138,427; 6,516,583; 6,591,573; 7,178,296; 8,122,671; 8,122,672; 8,146,322 and covered by one or more of U.S. patent nos. 5,660,017; 6,138,427; 6,516,583; 6,591,573; 7,178,296; 8,122,671; 8,146,322 and covered by one or more of U.S. patent nos. 5,660,017; 6,138,427; 6,516,583; 6,591,573; 7,178,296; 8,122,671; 8,146,322 and covered by one or more of U.S. patent nos. 5,660,017; 6,138,427; 6,516,583; 6,591,573; 7,178,296; 8,122,671; 8,146,322 and covered by one or more of U.S. patent nos. 5,660,017; 6,138,427; 6,516,583; 6,591,573; 7,178,296; 8,122,671; 8,146,322 and covered by one or more of U.S. patent nos. 5,660,017; 6,138,427; 6,516,583; 6,591,573; 7,178,296; 8,122,671; 8,146,322 and covered by one or more of U.S. patent nos. 5,660,017; 6,138,427; 6,591,672; 8,146,322 and covered by one or more of U.S. patent nos. 5,660,017; 6,138,427; 6,591,672; 8,146,322 and covered by one or more of U.S. patent nos. 5,660,017; 6,138,427; 6,591,672; 8,146,322 and covered by one or more of U.S. patent nos. 5,660,017; 6,138,427; 6,591,672; 8,146,322 and covered by one or more of U.S. patent nos. 5,660,017; 6,138,427; 6,138, 8,176,706 and 8,205,408; other U.S. and foreign patents pending; and also contains trade secret information that is PROPRIETARY to SidePlate Systems, Inc. [tel (800) 475-2077 and (949) 305-7889, fax (949) 305-6395; www.sideplate.com]. Copyright© 2012 SidePlate Systems, Inc. all rights reserved. Without limitation, this drawing and the information herein may be used by others solely (i) upon payment in full of SidePlate® License Fee to SidePlate

Systems, Inc. and (ii) in connection with the design, construction, operation, repair, maintenance, restoration or demolition of the building(s) specifically identified herein, all other uses being expressly prohibited.

CONSULTANTS: Date **Issues & Revisions:** VA FORM 08-6231, OCT 1978 5/8/2014 2:21:56 PM

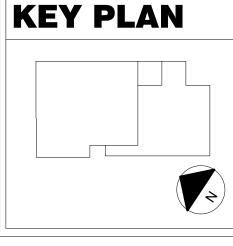
uarter inch = one foot
4 8

25909 PALA, STE 200, MISSION VIEJO CA 92691

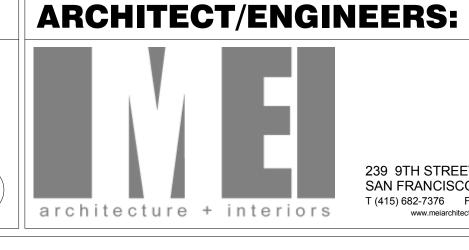
W24X



5/16



1 1/2 | W21X62 | 1 3/4





Drawing Title SIDEPLATE A TYPE & B TYPE TYPICAL DETAILS Approved: Project Director

U-Shaped

1, 2 or 3

L5x3x1/2 (Gr. 50)

CONSOLIDATE / EXPAND **MEDICAL PROCEDURES** MINOR (CEMP)

BRETT

HART

Project Number 612-111 Office of **Building Number Facilities** Management Drawing Number

2

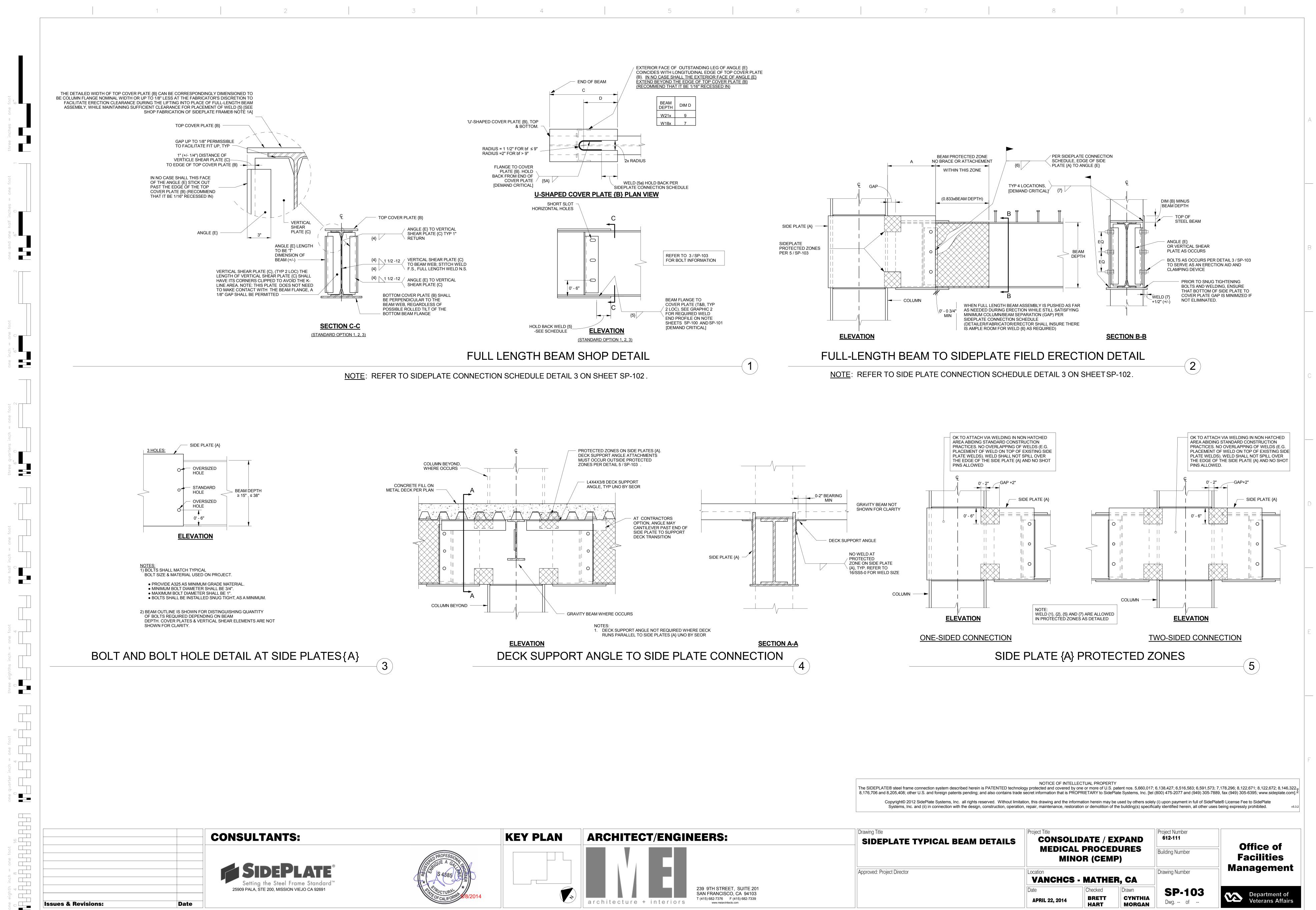
MORGAN

FULLY SPRINKLERED

VANCHCS - MATHER, CA

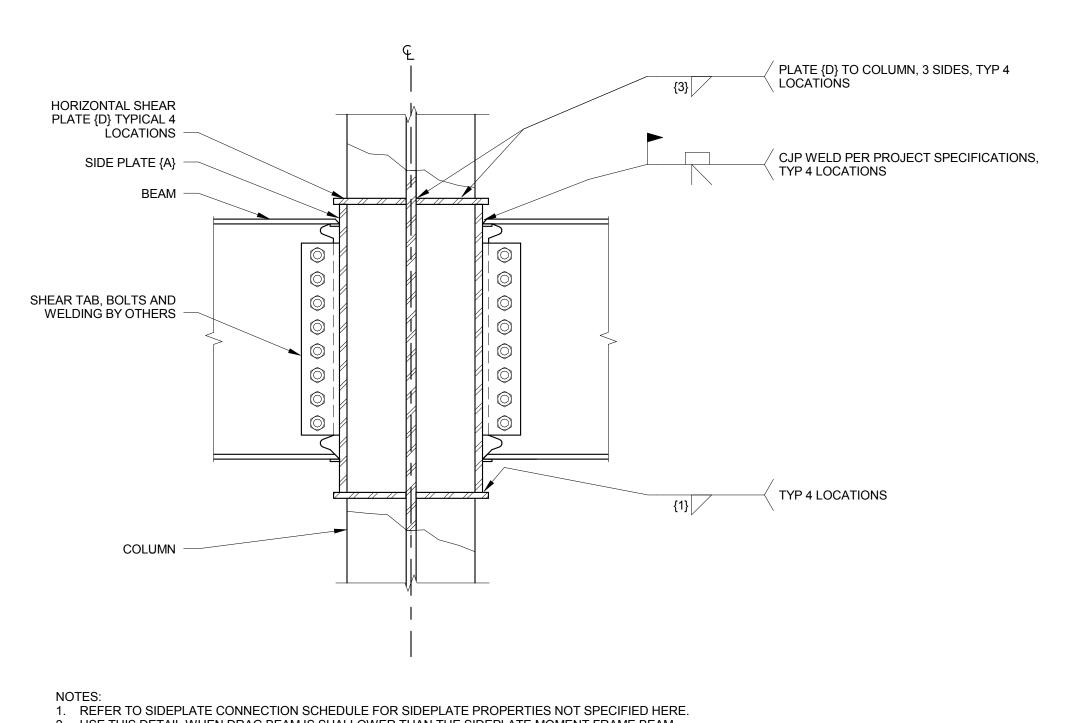
100% CONSTRUCTION DOCUMENTS

Veterans Affairs



VA FORM 08-6231, OCT 1978

5/8/2014 2:21:56 PM



use this detail when drag beam is shallower than the sideplate moment frame beam.

SHALLOW DRAG AND/OR CANTILEVER CONNECTION

5/8/2014 2:21:56 PM

VA FORM 08-6231, OCT 1978

NOTICE OF INTELLECTUAL PROPERTY

The SIDEPLATE® steel frame connection system described herein is PATENTED technology protected and covered by one or more of U.S. patent nos. 5,660,017; 6,138,427; 6,516,583; 6,591,573; 7,178,296; 8,122,672; 8,146,322 8,176,706 and 8,205,408; other U.S. and foreign patents pending; and also contains trade secret information that is PROPRIETARY to SidePlate Systems, Inc. [tel (800) 475-2077 and (949) 305-7889, fax (949) 305-6395; www.sideplate.com]. Copyright© 2012 SidePlate Systems, Inc. and (ii) in connection with the design, construction, operation, repair, maintenance, restoration or demolition of the building(s) specifically identified herein, all other uses being expressly prohibited.

one eighth inch = one root

0 4 8 16 Project Title Drawing Title Project Number **KEY PLAN CONSULTANTS: ARCHITECT/ENGINEERS:** 612-111 CONSOLIDATE / EXPAND SIDEPLATE MISC DETAILS Office of MEDICAL PROCEDURES Building Number **Facilities** MINOR (CEMP) Management Approved: Project Director Drawing Number **VANCHCS - MATHER, CA** 239 9TH STREET, SUITE 201 SAN FRANCISCO, CA 94103 T (415) 682-7376 F (415) 682-7339 25909 PALA, STE 200, MISSION VIEJO CA 92691 Department of Veterans Affairs BRETT Date HART **Issues & Revisions:** MORGAN

FULLY SPRINKLERED